

City of Gainesville

200 East University Avenue, Room 339
Gainesville, FL 32601

Proposal to Provide Actuarial Services for the City of Gainesville General Employees' Pension Plan and the City of Gainesville Retiree Health Insurance Trust Fund

June 25, 2018

BENEFITS | COMPENSATION | RETIREMENT | RISK MANAGEMENT



Insurance | Risk Management | Consulting

Bruce Johnson, EA, MAAA
Area Sr. VP of Actuarial & Retirement Services

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Technical Proposal

Ms. Diane Holder
City of Gainesville
General Government Procurement
200 East University Avenue, Room 339
Gainesville, FL 32601

Dear Ms. Holder:

Gallagher Benefit Services, Inc. (Gallagher) is pleased to submit our proposal to provide retirement plan actuarial services to the City of Gainesville (the City). This proposal addresses the request for proposal issued by the City. Specifically, the City is seeking an actuarial firm to provide ongoing actuarial services for their General Employees' Pension Plan and the Retiree Health Insurance Trust Fund. If Gallagher is chosen, we are committed to providing excellent service for these plans.

We believe that the following makes us a good candidate to perform your retirement benefit analysis:

- We provide a stable team of highly experienced actuarial consultants, all capable of leading and supporting the City engagement.
- We offer competitive and transparent pricing - our fees are typically 20% lower than the larger national firms. Our actuarial team, although smaller in size than these firms, has tremendous experience with plan of all types and sizes.
- We offer a unique combination of a small, local, team-oriented culture with vast national and international resources available to meet all of our clients' needs.
- We have successful experience transitioning new clients over from many firms, including AON, Conduent, Deloitte, Ernst & Young, Gabriel Roeder & Smith, Mercer, Milliman and Willis Towers Watson. We have a high retention rate. We simply do not lose clients due to dissatisfaction of service.

Gallagher greatly appreciates the opportunity to propose our services to the City of Gainesville. If you have any questions regarding this proposal, please contact me at (952) 356-0724.

Sincerely,



Bruce Johnson, EA, MAAA
Area Sr. VP of Actuarial & Retirement Services
Gallagher Benefit Services, Inc.

Technical Proposal - continued

Company History

Arthur J. Gallagher & Co. opened its doors for business in 1927 and is still “growing strong” because of a practiced ability to help clients think ahead. Founded by its namesake who became the leading producer in Chicago’s largest insurance brokerage, Gallagher is now one of the world’s largest insurance brokerage and risk management services firms. We have more than 26,000 employees and operations in 33 countries, and extend our client-service capabilities to over 90 countries through a global network of correspondent brokers and consultants.

Since 1961, we’ve been helping clients overcome business barriers and create new opportunities to cost-effectively attract, retain and productively engage the best performers in their field. Gallagher started trading on the NYSE under the symbol AJG in 1984.

Gallagher has maintained its steady growth through new business development and acquisitions. In recent years we acquired dozens of independent employee benefits consulting firms and allied service providers. This strategy continually adds some of the brightest minds in the employee benefits business to our talent pool, and serves clients through an expanding local office presence as well as our national and multinational practice and service groups.

As an industry-leading provider of employee benefits brokerage, consulting and administrative services with a strong growth record, we are well positioned to develop and administer programs that support a marketplace advantage for your organization.

Company Culture and Philosophy

The ideals, principles and values embodied by the founder whose name still appears on our door are part of our corporate DNA. Gallagher’s approach to business, cultivated through three generations of family leadership, has always centered on creating relationship value as true partners to our clients.

Gallagher’s interactions with you will be straightforward and candid. By earning the trust of our clients, we’ve sustained a reputation for ethics and a commitment to transparency that continue to contribute to our growth. In fact, Gallagher was the first insurance broker named to the Ethisphere® Institute’s annual list of the World’s Most Ethical Companies in 2012 – and was again recognized in 2013, 2014, 2015, 2016, 2017 and 2018.

The high standards of conduct we’ve set for our external professional relationships are the same rules we follow internally. *The Gallagher Way*, a one-page document that outlines our 25 shared values, was written in 1984 but is just as culturally relevant today. It speaks to the value of relationships and several tenets set guidelines for ethical behavior.

Technical Proposal - continued

Today's complex marketplace requires a trusted partner who is committed to making a genuine difference in the health and welfare of both your valued employees and your bottom line. Gallagher combines innovative solutions, thoughtful advice and honest business practices to minimize risk and help fuel *your* growth.

Mission and Values

Gallagher's mission is to:

- Build the best benefits services practice with brokers and consultants who understand the value of building relationships and trust, and creating experiences and results that inspire our clients' confidence
- Provide superior, cost-effective benefit products and services that meet the ever-changing needs of employers, while striving for the highest professional excellence in the delivery of those solutions
- Measurably help organizations manage and grow their businesses through our benefit services expertise and counsel

Gallagher will accomplish this mission with the kind of leadership that maintains our philosophy and continues to strengthen our company culture. We will honor the moral and ethical standards that are inherent to building trust in all relationships, and clients' confidence in our ability to create and maintain a Gallagher team that is the very best at what we do.

The Gallagher Way

The Gallagher Way is a one-page document written by our former chairman and CEO that defines the Gallagher culture. It describes the principles, behaviors and beliefs that have produced great work – and great working relationships – at Gallagher since the company was founded. These 25 shared values guide business conduct for each of us as individuals, and all of us as one team. You'll find them listed on our website at:

<http://www.ajg.com/about-us/the-Gallagher-way>

Technical Proposal - continued

Actuarial Team Overview

Gallagher is one of the leaders in retirement consulting in the public sector. Going back over 40 years, our Public Sector Practice is our largest niche area of expertise. Gallagher's Public Sector Practice serves 2,100+ clients, including: states, counties, cities, municipalities, villages, k-12 schools, special education districts, consortiums and other government employers.

Gallagher Actuarial & Retirement Services provides funding and financial accounting valuations, administration, compliance, employee communications, plan design, and consulting services to clients throughout the country. We have over 225 clients and serve more than 285 pension and postretirement medical plans. Our clients include public sector, publicly owned, privately owned, and non-profit entities.

Our pension actuarial service teams are located in Minneapolis, San Francisco, and Rochester, NY. Nationwide we have over 20 credentialed actuaries as well as additional analysts and dedicated administrative support staff. Our actuarial service team in Minneapolis has 5 credentialed actuaries, 4 actuarial analysts and 2 administrative support staff, and would be supported locally as needed by Glen Volk's team in Gallagher's Boca Raton, FL office.

Locally, our Boca Raton office takes great pride in their local presence in Florida and their deep understanding of the statutory filing requirements unique to Florida plans. Of particular note, this office has extensive experience working with local public entities, including:

- County Governments (Alachua, Monroe, Palm Beach)
- County Schools (Broward, Duval, Monroe, Okaloosa)
- City Governments (Boca Raton, Jacksonville, Miami Beach, Pembroke Pines)
- Other Special Districts (Hillsborough County Aviation Authority, St. Petersburg College)

Gallagher consultants provide services tailored to fit your organization's specific needs. Whether you want expertly prepared actuarial and compliance reports, assistance with product placement for defined benefit, defined contribution and non-qualified plans, or help with outsourcing your plan administration, our team can deliver the right solution for your needs.

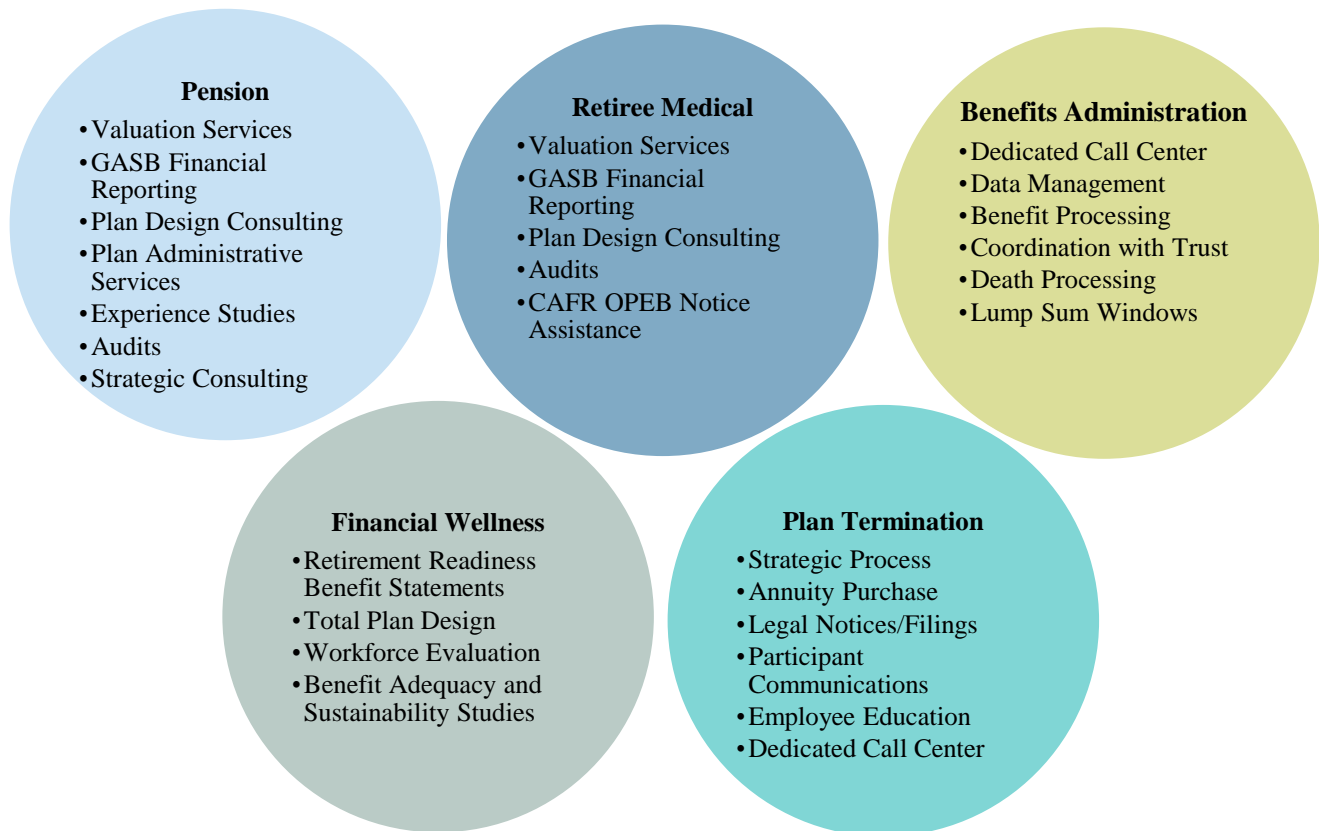
We set ourselves apart from our competitors by providing a service experience that is second to none. This starts with a central focus on providing solutions tailored to individual clients' specific constraints, needs and goals. We're committed to recommending what is in the client's best interests – not ours – and to delivering on our promises. We're not afraid to think outside the box to find unique solutions; some examples include: plan design strategies, participant communications and education, enhanced benefit statements, pension de-risking, online web portal, etc.

Technical Proposal - continued

Our Services

Our actuarial service team has significant expertise and experience providing actuarial services to public sector retirement plans. These services span all aspects of actuarial consulting including, but not limited to: annual actuarial valuation; funding projections, recommendations and requirements; GASB financial reporting; experience studies; plan design consulting; actuarial audits, etc.

Because of our broad array of services and clients and our background working in both the private and public sector, we bring a well-balanced perspective to retirement consulting projects. Gallagher Actuarial & Retirement Services has significant experience offering a variety of services including:



Technical Proposal - continued

City of Gainesville - Scope of Services

Actuarial Process Overview

Our typical client engagement team consists of a lead actuarial consultant, 1-2 actuarial analysts and 1-2 administrative staff. Additional resources are utilized for peer review and professional standards review.

The lead actuarial consultant's responsibilities include: overall relationship and project management; final review of all calculations and client deliverables; actuarial certifications; communication and presentation of results. Preliminary data, programming, asset review, gain/loss analysis and benefit calculations are performed by the actuarial analyst. Administrative staff provide support in report preparation, printing, mailings, call center, etc.

All final reports and certifications go through formal peer and professional standards reviews. We monitor updates on an ongoing basis to ensure that our services comply with all applicable actuarial and accounting standards, rules and regulations. Sample deliverables are available upon request.

Reporting and Controls

Our team's project management methodology and team structure ensures the quality and timeliness of all services provided. Gallagher actuaries take a good faith and proactive approach to ensure that our work is always complete, accurate and in accordance with all applicable Actuarial Standards of Practice (ASOP), Generally Accepted Accounting Principles (GAAP), as well as all local, state and federal rules and regulations.

In light of recent data breaches affecting widely known and trusted global entities (e.g. Facebook, Equifax, Yahoo, Target, etc.), we understand that data security and confidentiality is and needs to be a top concern. Gallagher recognizes the importance of having the necessary safeguards in place to protect our clients and their employees. As such, Gallagher has dedicated IT support staff that monitor, review and update these safeguards on an ongoing basis. We also have privacy and security policies in place to protect both incoming and outgoing client data and communications.

Technical Proposal - continued

Transition of Actuarial Services

If Gallagher is selected to provide ongoing actuarial services for the City, the next step in the process would be to work with the prior actuary to match the previous results and procedures provided for the City. The following is an outline of the implementation plan for the transition of actuarial service provider for the City's retirement plans:

Task	Who's Responsible	Timing
Kick-off meeting with City: team introductions, understanding culture, vision and goals, transition planning	City & Gallagher	Immediate
Schedule regular updates to monitor progress	City & Gallagher	Week 1
Provide detailed work plan for transition and ongoing services	Gallagher	Week 1
Provide City with communication to prior actuarial firm requesting: census data, sample benefit calculations, etc.	Gallagher	Week 1
Provide prior actuary with request for information	City	Week 1
Provide requested information to Gallagher	Prior Actuary	Weeks 1-2
Provide Gallagher: plan document, amendments, SPD and other documents as needed for transition	City	Weeks 1-2
Match of actuarial valuation results and benefit calculation procedures	Gallagher	Weeks 3-5
Resolve discrepancies between results or procedures, if applicable	Gallagher & Prior Actuary	Weeks 6-7
Formally report findings and commence ongoing services	Gallagher	Week 8

The amount of the City's involvement with this process should be minimized provided cooperation from the prior actuarial service provider and that all requests and information are provided in a timely and complete manner. Gallagher has worked with many actuarial firms to transition actuarial services. As noted, Gallagher will provide a template letter for transition of services as well as a data request to match prior results. Once the prior actuary has received notice of termination, we will work directly with them to complete our work.

Please note: there are no additional fees charged for transition services, including reproduction/match of recent actuarial valuation results or benefit calculation procedures.

Technical Proposal - continued

Schedule and Timing of Annual Services

The sample project timeline below outlines the process for Gallagher to provide ongoing Actuarial Services for the City. This timeline reflects all annual services required by the City. Please note that we are flexible with respect to the timing of events. Gallagher will work with the City to adjust the timeline as needed to ensure their needs are being met.

Project	Date	Who's Responsible	Comments
Conference call – planning	September 15	City/GBS	Discuss project and timeline; review to ensure timing of events meet the City's reporting requirement needs
Annual data request	October 1	GBS	Gallagher to issue a data request for census and asset information after the close of the fiscal year
Provide annual data	October 31	City	Provide requested information to GBS
Conference call – progress	November 30	City/GBS	Conference call and progress update to discuss census data, plan provisions, assumptions, etc.
Preliminary results completed	December 15	GBS	Preliminary funding and GASB results
Issue experience study, or N/A	December 31	GBS	Formal report detailing the results of the experience study
Onsite meeting	January 15	City/GBS	On-site meeting with the City to review preliminary results and experience study, if applicable.
Issue final reports	January 31	GBS	Issue final annual funding valuations and financial disclosure reports

Technical Proposal - continued

Annual Funding Valuations and Financial Reporting

Our service team has significant expertise and experience regarding annual actuarial valuations and financial reporting requirements under GASB 67/68 and GASB 74/75. These services are provided to nearly all of our public sector pension clients on an annual basis.

Basic demographic and economic assumption review and analysis are completed as part of the annual actuarial valuation process. Basic liability projections, funding forecasts and other requests will also typically be provided as requested at no additional cost. Complex projections, forecasts or analysis are available as ad-hoc projects for an additional fee.

Sample annual valuation and GASB financial disclosure reports are included in the appendix.

Benefit Calculations and Benefit Statements

These are provided as standard services to nearly all of our pension clients. Standard benefit calculations include distribution packets for terminated or retired participants and provide all communication materials (e.g. election forms, tax notices, etc.) in accordance to each individual's requirements. Sample statements and distribution packages are available upon request. We will customize these to meet your needs.

Description of our Actuarial Software

Gallagher utilizes ProVal, a highly reputable and widely used actuarial software product developed and maintained by Winklevoss Technologies. This tool is used by our team regularly in the completion of annual actuarial valuations, GASB 67/68 and 74/75 financial reporting, benefit calculations, experience studies, etc. This tool is also used to measure the impact of assumption changes, model plan design and funding scenarios, and address other client inquiries as needed.

This platform includes functionality specifically designed to address public sector considerations, including financial reporting requirements as outlined in GASB 67/68 and 74/75. Our team has extensive experience supporting public sector clients and has developed internal tools/models, reports and other deliverables to address their needs.

Technical Proposal - continued

Additional Services

Plan Design Consulting

Our team has extensive experience working with plan sponsors on plan design changes and assisting clients with developing retirement strategies that align with their objectives. Examples include development, review and implementation of changes regarding plan formulas, eligibility and benefit options, including assumption review and cost analysis. We also have significant experience targeting de-risking and plan termination strategies.

Pension Administration

Our services include flexible levels of benefits administration ranging from little or no direct participant contact to a dedicated call center and fully functioning online participant web portal. Gallagher's pension administration services have grown significantly the last few years as the need for such services with a high level of expertise has been evident in the market. These services include: dedicated call center, data management, benefit processing, coordination with trust, etc.

Enhanced Benefit Statements

We offer enhanced benefit statements that demonstrate projected income replacement itemized by source, including: defined benefit plan accrued and projected benefits; defined contribution plan current, projected and annuitized balances; social security projections; and other sources of retirement income as applicable.

Online Web Portal

We partner with our benefits administration software vendor to offer a secure online web portal customized for our clients. The primary purpose of this portal is plan participant access, however, plan sponsors also have access as desired. The main features of this portal are listed below; a live demo of this portal is available upon request.

- Client specific branding as desired
- Maintain/update personal information (e.g. name, address, email, telephone, beneficiary, marital status, banking information, tax withholding, etc.)
- View estimated current and projected benefit levels
- Instantaneous variable benefit estimates for retirement planning purposes
- Initiate formal retirement calculation process
- Track status of retirement and benefit calculation process
- View annual benefit statements
- Download other pension-related documents online (e.g. SPD, Plan Document, FAQ, etc.)
- Store and archive personal documents online for subsequent retrieval
- Receive alerts and other communications posted by Gallagher or the City
- Direct links and contact information for administrative support, questions, other plan websites, etc.

Price Proposal

Our fee quotes for annual services are not to exceed figures to ensure that you will not receive unexpected fee charges during the course of the guarantee period. No additional fees are applicable for technical, administrative, printing or other costs. Our practice is to deliver services that ensure client satisfaction. We will respond to all questions and inquiries related to our work without incurring additional time charges. We believe our clients should never be concerned to call us because of the threat of incurring time charges for the phone call. If additional charges are necessary, we will review the expected scope of additional services with you and commit to a fixed fee for the requested service.

Annual Recurring Fees	w/o Health	w/ Health
General Employees' Pension Plan		
Annual Actuarial Funding Valuation	\$ 42,500	\$ 42,500
Annual GASB 67/68 Financial Reporting	5,000	5,000
Florida Statute 112.664 Disclosure	5,000	5,000
Annual Benefit Statements - Standard	<u>0</u>	<u>0</u>
Total	\$ 52,500	\$ 52,500
Retiree Health Insurance Trust Fund		
Biennial Actuarial Funding Valuation	\$ 0	\$ 20,000
Annual GASB 74/75 Financial Reporting	<u>5,000</u>	<u>5,000</u>
Total	\$ 5,000	\$ 25,000
Total Annual Fees	\$ 57,500	\$ 77,500

Other Non-recurring Fees	Fees
Benefit Calculations	\$ 250
Add-on Services	
Experience Study	\$ 7,500
Annual Benefit Statements - Enhanced	5,000
Online participant web portal	Call to discuss
Full Plan administration including dedicated call center	Call to discuss
Hourly Rates	
Actuarial Consultant	\$ 320-340
Actuarial Analyst	230-250

Qualifications

Engagement Team

The following engagement team will be assigned to the City of Gainesville:

Primary Team	Title/Role	Phone/Fax/ Location	Email
Jesse Millner EA, FSA	Pension Actuarial Lead Consultant – Primary Contact Strategic leadership of all DB Pension work, management of project, delivery of results	P (952) 356-3558 F (866) 743-5313 Minneapolis, MN	jesse_millner@ajg.com
Jen Turk EA, FSA, MAAA	OPEB Actuarial Lead Consultant – Primary Contact Strategic leadership of all OPEB work, management of project, delivery of results	P (952) 356-0720 F (866) 743-5313 Minneapolis, MN	jen_turk@ajg.com
Claire Kingstad	Actuarial Analyst Account service contact: daily questions and plan management	P (952) 356-3870 F (866) 743-5313 Minneapolis, MN	claire_kingstad@ajg.com
Austin Miller	Actuarial Analyst Assists with completion of work product and has primary responsibility for data management and programming	P (952) 356-0692 F (866) 743-5313 Minneapolis, MN	austin_miller@ajg.com
Additional Resources			
Bruce Johnson, EA, MAAA	Peer and Professional Standards Review Ensures quality of services and adherence to all actuarial standards	P (952) 356-0724 F (866) 743-5313 Minneapolis, MN	bruce_johnson@ajg.com
Glen Volk, FSA, MAAA	Local Resource Consulting Actuary located in Boca Raton, FL.	P (561) 998-6755 Boca Raton, FL	glen_volk@ajg.com

To verify all credentials listed for the engagement team above, please visit www.actuarialdirectory.org.

Qualifications - continued

Each member of the engagement team has extensive experience providing retirement plan actuarial consulting services to both public and private sector clients. They are experienced in working with all types of plan designs including defined benefit and defined contribution plans.

Bios

Jesse Millner, EA, FSA – Pension Actuarial Lead Consultant

Jesse joined Gallagher in 2011 after earning his Bachelor's Degree in Mathematics – Actuarial Science from the University of Minnesota. He is an Enrolled Actuary and a Fellow of the Society of Actuaries.

Since joining Gallagher, Jesse has been involved in a variety of projects including pension and postretirement medical actuarial valuations and financial reporting for both private employer (qualified and non-qualified) and public sector clients. He is regularly involved in all aspects of our actuarial services, including: individual benefit calculations, annual valuations, financial reporting, experience studies, plan design studies, etc.

He also has significant experience presenting and communicating results to clients, including pension Boards and Committees, and developing unique/customized content and deliverables geared towards individual clients' needs and/or requests.

Jen Turk, EA, FSA, MAAA – OPEB Actuarial Lead Consultant

Jen joined Gallagher in 2005 after earning her Bachelor's Degree in Mathematics – Actuarial Science from Minnesota State University – Moorhead. She is an Enrolled Actuary, a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries.

Since joining Gallagher, Jen has become our resident OPEB expert. She is the lead consultant on postretirement medical valuations under GASB No. 74/75 and ASC Topic 715 for many public and private sector clients, including a consortium of 37 public sector entities in Minnesota. She also has significant expertise and experience regarding pension funding valuations, plan design studies, plan terminations, experience studies and actuarial audits.

Jen is involved with pension plan funding valuations under IRC Section 430 and accounting valuations under ASC Topics 715 and 960. She assists clients in understanding future projected plan costs and funded status through forecasting and plan design studies, the plan termination process by assisting with funding strategies, government filings, and participant communication and benefit payouts, and is also involved in analysis and cost projections for other plans such as long-term care insurance, COBRA liabilities, severance, and non-qualified benefits.

Qualifications - continued

Claire Kingstad – Actuarial Analyst

Claire joined the Gallagher in 2016 from Aon Hewitt where she began her actuarial career after earning her Bachelors of Science Degree in Mathematics - Actuarial Science from the University of Minnesota Twin Cities. She is currently studying to become an Associate in the Society of Actuaries.

Claire has significant experience working on a variety of qualified pension and postretirement medical projects for large and mid-sized plan sponsors, assisting lead consultants in analyses on lump sum windows, plan design changes, and non-discrimination testing.

Since joining Gallagher, Claire has been involved in all steps of the pension valuation process, including data and asset reconciliation, assumption setting and review, gain-loss analysis, sensitivity testing and report preparation/review. She also has experience working on individual benefit calculations, annual government compliance, plan terminations, and pension benefit administration.

Austin Miller – Actuarial Analyst

Austin joined Gallagher in 2015 after earning his Bachelor's Degree in Mathematics - Actuarial Science from the University of Minnesota. He is currently studying to become an Associate in the Society of Actuaries.

Since joining Gallagher, Austin has been involved in a variety of projects including actuarial valuation and benefit administration functions for private employer and public sector clients. He is involved in all steps of the actuarial valuation process including data and asset reconciliation, assumption setting and review, gain-loss analysis, individual benefit calculations, and annual government compliance.

Qualifications - continued

References

Below is a representative sample of current Gallagher Actuarial & Retirement Services clients. We encourage you to contact any of these clients to discuss our services.

University of Florida Foundation – Gainesville, FL

David Christie – Assistant Vice President & CFO (352) 392-5475 dchristie@uff.ufl.edu

Gallagher has provided actuarial services for the University of Florida Foundation since 2010, including annual valuation work, financial disclosures, benefit calculations and distribution forms, and pension legislation consulting. Currently, Gallagher is assisting UFF in transitioning from private employer financial reporting (FASB ASC 715) to public employer financial reporting (GASB 67/68).

Palm Beach County, FL

Andrea Mackey – Benefits Specialist (561) 233-5405 amackey@pbcgov.org

Gallagher has provided services for Palm Beach County for over 25 years, including insurance development and analysis (RFPs, renewals, forecasting, rate development, benefit and cost impact); annual comparison of fully insured vs. self-funding options, review and valuation of benefits, and cost impact of benefit changes; actuarial services, including 112.08 filing, GASB analysis and cost impact, Medicare Part D filing, ERRP filing Compliance review of federal and state mandates, update plans/policies and impacts; develop retiree incentive programs; budget projections and forecasting; plan redesign and modeling; presenter and technical resource for insurance and board meetings, etc.

City of Minot, ND

Sue Greenheck – Treasurer (701) 857-4773 greenhec@web.ci.minot.nd.us

Gallagher has provided actuarial services for the City of Minot for over 20 years, including annual funding valuation work, financial disclosures, plan design consulting and experience studies.

City of Bismarck, ND

Sheila Hillman – Director of Finance (701) 355-1600 shillman@bismarcknd.gov

Gallagher has provided actuarial services for the City of Bismarck for over 20 years, including annual valuation work, financial disclosures, benefit calculations and distribution forms, plan design consulting and experience studies.

City of Fort Worth, TX

Margaret Wise – Assistant HR Manager (817) 392-8059 margaret.wise@fortworthtexas.gov

Gallagher has consulted as City Actuary which directly evolved from actuarial audit work beginning over 10 years ago. The Fort Worth Retirement Fund has over 10,000 participants and includes a complex COLA structure. We have been involved in numerous plan design studies as the City has dramatically changed their benefit provisions.

Qualifications - continued

Financial Statements

Gallagher financial statements can be accessed using the following link:

<http://investor.ajg.com/financial-reports>

Section 1(M) Qualifications of Proposers

Gallagher represents that it has adopted and maintains a background screening program and related personnel policies reasonably designed to exclude dishonest, immoral, and unlawful personnel from providing services and shall ensure that all personnel have successfully passed all requisite and appropriate background screening prior to commencement of employment, including, but not limited to: (1) county, state, and federal criminal history checks, including felony and misdemeanor; (2) education and employment verification to confirm all employment positions and highest degree earned; (3) Social Security verification; and (4) an OFAC (Office of Foreign Assets Control) check. Please note that it is not standard operating procedure for Gallagher to require background checks of its employees beyond pre-screen background checks conducted as part of Gallagher's onboarding process.

Consulting and insurance brokerage services to be provided by Gallagher Benefit Services, Inc. and/or its affiliate Gallagher Benefit Services (Canada) Group Inc. Gallagher Benefit Services, Inc. is a licensed insurance agency that does business in California as "Gallagher Benefit Services of California Insurance Services" and in Massachusetts as "Gallagher Benefit Insurance Services." Neither Arthur J. Gallagher & Co., nor its affiliates provide accounting, legal or tax advice

Appendix

The following items are included in the attached appendix:

- Proposal Response Form
- Drug-Free Workplace Form
- Deviations
- Administrative Actions
- Sample Reports
 - Annual Actuarial Funding Valuation - Pension
 - Annual GASB 67/68
 - Annual Actuarial Funding Valuation – Medical
 - Annual GASB 74/75
 - Experience Study Report

PROPOSAL RESPONSE FORM – SIGNATURE PAGE

(submit this form with your proposal)

TO: City of Gainesville, Florida
200 East University Avenue
Gainesville, Florida 32601

PROJECT: Actuarial Services for the City of Gainesville General Employees' Pension Plan and the City of Gainesville Retiree Health Insurance Trust Fund

RFP #: FPEN-180084-DH

RFP DUE DATE: June 25, 2018

Proposer's Legal Name: Gallagher Benefit Services, Inc.

Proposer's Alias/DBA: Gallagher Benefit Services, Inc.

Proposer's Address: 3600 American Blvd. W., Suite 500
Bloomington, MN 55431

PROPOSER'S REPRESENTATIVE (to be contacted for additional information on this proposal)

Name: Bruce Johnson, EA, MAAA

Telephone Number 952-356-0724

Date: 6/22/2018

Fax Number 866-743-5313

Email address bruce_johnson@ajg.com

ADDENDA

The Proposer hereby acknowledges receipt of Addenda No.'s 1, 2, _____, to these Specifications.

TAXES

The Proposer agrees that any applicable Federal, State and Local sales and use taxes, which are to be paid by City of Gainesville, are included in the stated bid prices. Since often the City of Gainesville is exempt from taxes for equipment, materials and services, it is the responsibility of the Contractor to determine whether sales taxes are applicable. The Contractor is liable for any applicable taxes which are not included in the stated bid prices.

LOCAL PREFERENCE (check one)

Local Preference requested: ☐ YES ☒ NO

A copy of your Business tax receipt and Zoning Compliance Permit should be submitted with your bid if a local preference is requested.

QUALIFIED LOCAL SMALL AND/OR DISABLED VETERAN BUSINESS STATUS (check one)

Is your business qualified as a Local Small Business in accordance with the City of Gainesville Small Business Procurement Program? (Refer to Definitions) ☐ YES ☒ NO

Is your business qualified as a Local Service-Disabled Veteran Business in accordance with the City of Gainesville Small and Service-Disabled Veteran Business Procurement Program? (Refer to Definitions) ☐ YES ☒ No

SERVICE-DISABLED VETERANS' BUSINESS (check one)

Is your business certified as a service-disabled veterans' business? ☐ YES ☒ NO

LIVING WAGE COMPLIANCE

See Living Wage Decision Tree (Exhibit C hereto)

Check One:

- ☒ Living Wage Ordinance does not apply (check all that apply)
- ☒ Not a covered service
 - ☐ Contract does not exceed \$100,000
 - ☐ Not a for-profit individual, business entity, corporation, partnership, limited liability company, joint venture, or similar business, who or which employees 50 or more persons, but not including employees of any subsidiaries, affiliates or parent businesses.
 - ☐ Located within the City of Gainesville enterprise zone.
- ☐ Living Wage Ordinance applies and the completed Certification of Compliance with Living Wage is included with this bid.

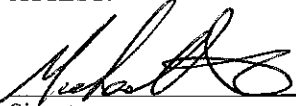
NOTE: If Contractor has stated Living Wage Ordinance does not apply and it is later determined Living Wage Ordinance does apply, Contractor will be required to comply with the provision of the City of Gainesville's living wage requirements, as applicable, without any adjustment to the bid price.

SIGNATURE ACKNOWLEDGES THAT: (check one)

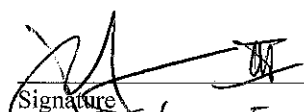
- ☐ Proposal is in full compliance with the Specifications.
- ☒ Proposal is in full compliance with specifications except as specifically stated and attached hereto.

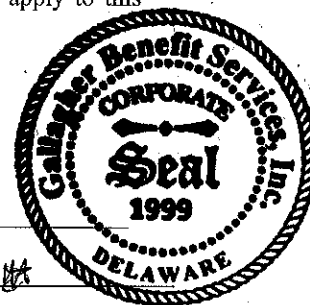
Signature also acknowledges that Proposer has read the current City of Gainesville Debarment/Suspension/Termination Procedures and agrees that the provisions thereof shall apply to this RFP.

ATTEST:


 Signature
 By: Michael A. O'Brien
 Title: Area President

(CORPORATE SEAL)
 PROPOSER:


 Signature
 By: E. J. Krumm
 Title: Regional President



DRUG-FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that

Gallagher Benefit Services, Inc.

does:

(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for the drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Karen Pielor

Bidder's Signature

6/18/18

Date

Deviations

Gallagher is able to accept the provisions as outlined in the Request for Proposal provided, with the following deviations. We welcome the opportunity to discuss these deviations in more detail and are confident we can work to mutual agreement on contract terms.

Section I(V) Investigation of Alleged Wrongdoings, Litigation/Settlements/Fines/Penalties:

Please see the attached summary of administrative actions taken against Gallagher in the appendix included in this proposal.

Section V(B)(4) General Terms and Conditions:

Indemnification should be limited to negligent acts and omissions, breaches of the contract, intentional misconduct, or violations of law.

Limitation of Liability of fees needs to be added to the indemnification provision. We recommend the following language be added:

LIMITATION OF LIABILITY: Notwithstanding anything contained herein to the contrary, even if advised of the possibility of loss, liability, damage or expense, Gallagher shall not be liable for any indirect damages, including any lost profits, data, business, goodwill, anticipated savings, opportunity or use or other incidental or consequential damages. Furthermore:

- i. Gallagher shall not be responsible for damages caused by acts of Client's employees, representatives, agents, subcontractors, vendors, or suppliers.
- ii. Gallagher's aggregate liability under this Agreement, if any, to Client for claimed loss or damage arising under this Agreement shall not exceed the amount actually paid by Client to Gallagher.
- iii. Client hereby expressly acknowledges and agrees that in view of the amount of the fees paid or to be paid hereunder, the limitations of liability in this Section 9 are in all respects fair and reasonable and reflect a duly considered allocation of risk between the Parties.
- iv. Notwithstanding the foregoing, this Section 9 shall not limit any liability for the personal injury to or death of any individual or physical property damage directly caused by Gallagher or beyond the extent to which the limitation would be prohibited by applicable law.

Deviations

Section V(B)(5) Insurance:

- Gallagher can agree to name the City as an additional insured on its Commercial General Liability Policy but it will be via a Certificate of Insurance, not an endorsement.
- Gallagher's insurers are not required to provide advance notice of cancellation/non-renewal via the terms of the policies, so Gallagher cannot agree to provide 30 days prior notice to its clients. Rather, any cancelled or non-renewed policy will be replaced with no coverage gap and a current Certificate of Insurance will be provided to the City.

SUBJECT: Administrative Actions
Gallagher Benefit Services, Inc.
FEIN: 36-4291971

In October, 2013 an administrative action was issued against Gallagher Benefit Services, Inc. by the New York State Department of Financial Services for failure to report actions taken against it by the Florida Department of Financial Services and Utah Insurance Department within 30 days of their respective final dispositions and for providing materially incomplete information on its original application for an agent's license, by failing to disclosure that in 2005 its owner, Arthur J. Gallagher & Co., was ordered by the Illinois Division of Insurance to establish a fund to be paid to certain policy holders of Arthur J. Gallagher & Co., and was ordered by the Illinois Division of Insurance not to engage in certain conduct in placing, renewing, consulting on or servicing any retail insurance policy. Forfeiture in the amount of \$3,750.00 was assessed.

In September, 2014 the Commissioner of Banking and Insurance, State of New Jersey issued a consent order against Gallagher Benefit Services, Inc. for potential violations of the New Jersey Producer Licensing Act. A fine of \$5,000.00 was assessed.

It is important to note that all administrative actions taken have been strictly against the entity(s). There have been no administrative action(s) taken against any of the individual professional or occupational licenses held by any of the entity's directors or officers.



Sample Reports

**ABC City
Employees' Pension Plan**

Actuarial Valuation

January 1, 2018



Arthur J. Gallagher & Co.

SAMPLE



Arthur J. Gallagher & Co.

ABC City Employees' Pension Plan

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ABC CITY EMPLOYEES' PENSION PLAN

ACTUARIAL CERTIFICATION

January 1, 2018 to December 31, 2018

In our opinion, the following report presents fairly the actuarial position of the plan in accordance with Generally Accepted Actuarial Principles and Practices. The purpose of this report is to develop a funding recommendation. Determinations for other purposes may be different; the results in this report should not be used for other purposes.

Our Actuarial Valuation has been completed with reliance upon participant and financial information provided to us by the ABC City. We have reviewed the data provided to us for general reasonableness but did not audit the data. The accuracy of the information in this report is dependent on the quality and completeness of the data provided to us. Each assumption not specified by statute or regulations is reasonable taking into account the experience of the Plan, Plan-specific features, the purpose of the measurement and reasonable expectations.

The actuarial assumptions used in this report were selected by the ABC City, in consultation with Gallagher Benefit Services, Inc. Based on a review of historic experience, Plan-specific features, and anticipated future outlook, the actuarial assumptions not specified by statute or regulation, each and in the aggregate, are reasonably related to the experience of the Plan and reflect a reasonable estimate of anticipated experience under the Plan.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. Due to the limited scope of this engagement, we did not complete an analysis of the potential range of such future measurements.

To the best of our knowledge, the information contained in this report is complete, accurate and in accordance with generally accepted actuarial principles as recommended by the American Academy of Actuaries. The actuary is an Enrolled Actuary and is qualified to render the actuarial opinion contained in this report.

Date

Date



Arthur J. Gallagher & Co.

ABC CITY EMPLOYEES' PENSION PLAN

EXECUTIVE SUMMARY

In this report we present the results of the January 1, 2018 Actuarial Valuation of the ABC City Employees' Pension Plan.

In 2012 an experience study covering the previous seven plan years was conducted. As a result of this study many assumptions were changed effective with the January 1, 2013 Actuarial Valuation. The disability assumption was removed and the marriage, salary increase, mortality, withdrawal and retirement assumptions were all changed. The investment return assumption was also changed from 7.75% to 7.50% and the plan was amended to exclude overtime from the Average Monthly Earnings calculation effective February 24, 2013.

There were no assumption changes for the January 1, 2018 Actuarial Valuation from those used for the January 1, 2017 Actuarial Valuation. Effective January 1, 2014 the Plan has been closed to new participants. As a result of the plan closing, the amortization method was changed from an open 30-year level percentage of payroll method to a 30-year closed level dollar method. As of January 1, 2018 there are 26 years remaining in the amortization period.

Funded Status

As of January 1, 2018, the Plan is 53.1% funded on an actuarial value of assets basis. When measured on a market value basis, the Plan is 54.1% funded. The funded status as of January 1, 2017 was 52.4% funded on an actuarial value basis and 49.5% on a market value basis.

During 2017, the market value rate of return was 15.9%. The actuarial value of assets includes some recognition of the 2014, 2015, and 2016 investment losses, and partially recognizes the 2013 and 2017 investment gains. The actuarial value of assets rate of return for 2017 was 7.1%. This created a \$0.3 million actuarial asset loss during 2017. The sources for this loss are described in Exhibit 10.

2019 Recommended Contribution

For budgeting purposes the recommended 2019 City contribution rate is \$5,329,140 (35.83% of projected 2019 covered pay). This amount is developed in Exhibit 11. We assume that active participants will continue to contribute 14.74%. The recommended City Contribution is the amount needed from the City to fund both active participant benefit accruals and the unfunded actuarial accrued liability over a 26 year period. Exhibit 12 shows the expected schedule of future City Contributions.

Government Accounting Standards Board Statement Nos. 67 and 68

This report provides the funding recommendation for the Plan. Schedules required for GASB No. 67 and No. 68 will be provided separately.



ABC CITY EMPLOYEES' PENSION PLAN

SUMMARY OF RESULTS

	1/1/17	1/1/18
1. Number of Members		
(a) Active	254	234
(b) Retired	263	266
(c) Terminated vested	31	32
(d) Terminated non-vested due refund	<u>18</u>	<u>20</u>
(e) Total Members	566	552
2. Expected payroll	\$ 16,071,692	\$ 15,545,784
3. Market Value of Assets	\$ 63,937,754	\$ 72,336,210
4. Actuarial Accrued Liability		
(a) Active Members	\$ 41,812,975	\$ 43,958,323
(b) Retired Members	82,781,485	84,914,142
(c) Terminated vested Members	4,505,766	4,669,065
(d) Terminated non-vested due refund	<u>134,529</u>	<u>147,437</u>
(e) Total	129,234,755	133,688,967
5. Actuarial Value of Plan Assets	\$ <u>67,672,392</u>	\$ <u>70,922,775</u>
6. Unfunded Actuarial Accrued Liability (4e-5)	\$ 61,562,363	\$ 62,766,192
7. Budgeted City/Employee contribution rate	31.40% / 14.74%	35.70% / 14.74%
8. Actual 2017/Budgeted 2018 total contributions	\$ 7,126,315	\$ 7,800,002 ¹
9. Amortization period based on expected funding level	27 years ²	26 years ³
10. Recommended 2018/2019 City Contribution	\$ 5,253,409	\$ 5,329,140

¹ Determined assuming employer/employee contributions are 35.70%/14.74% of payroll respectively in 2018.

² Assuming employer/employee contributions total \$7,415,479 for 2017 and are set each year thereafter using a closed level dollar amortization method.

³ Assuming employer/employee contributions total \$7,800,002 for 2018 and are set each year thereafter using a closed level dollar amortization method.



Input Information



Arthur J. Gallagher & Co.

ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 1

Summary of Plan Provisions

The following summary has been prepared for valuation purposes only. It outlines the provisions necessary to perform the Actuarial Valuation, as interpreted by Gallagher Benefit Services, Inc.

Definitions

<i>Average Monthly Earnings:</i>	<p>For Members hired before July 6, 2010, the average of the highest 36 months (need not be consecutive) of pay within the last 120 months.</p> <p>For Members hired after July 5, 2010, the average of the highest 48 months (need not be consecutive) of pay within the last 120 months.</p> <p>Effective February 24, 2013, Overtime pay is excluded.</p>
<i>Effective Date of the Plan:</i>	June 1, 1942.
<i>Early Retirement Date:</i>	Vested Members are eligible for a monthly pension commencing at age 60.
<i>Member:</i>	A present Employee who is contributing to the fund.
<i>Normal Form of Benefit:</i>	Married Members receive a Joint & Two-Thirds to Survivor annuity. Single Members receive a Life Only annuity.
<i>Normal Retirement Date:</i>	<p>Vested Members who have attained age 60 are eligible for a monthly pension benefit. In addition, after December 31, 2003:</p> <p>Vested Members hired before July 6, 2010 satisfying the Rule of 85 are eligible for an unreduced monthly pension benefit.</p> <p>Vested Members hired after July 5, 2010 satisfying the Rule of 90 and who have attained age 55 are eligible for an unreduced monthly pension benefit.</p> <p>The Rule of 85/90 is satisfied when the Member's age (measured in years, months, and days) plus the Member's total period of Membership (measured in years, months, and days) equals 85/90 years.</p>
<i>Plan Year:</i>	January 1 st through December 31 st .



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 1 (Continued) Summary of Plan Provisions

Service: The number of years of service for determining retirement benefits will be measured in terms of years, months, and days (which often will result in a fraction). Service in the armed forces after becoming a Member of the plan shall be included as part of service to the city if bought back.

Vested Member Members hired before July 6, 2010 are Vested Members after the completion of 60 months of Service.

Members hired after July 5, 2010 are Vested Members after the completion of 120 months of Service.

Plan Provisions

Eligibility: Every full time Employee of the ABC City (excluding all non-civil service employees) shall become a Member at the time he commences employment provided he is contributing to the fund. Each Member must pay a \$25.00 Membership fee and pay each pay period an amount equal to a percentage of his salary computed according to the following schedule:

- (1) Prior to 7/1/82, 5.00%
- (2) After 6/30/82 and prior to 1/1/83, 5.65%
- (3) After 12/31/82 and prior to 1/1/84, 6.12%
- (4) After 12/31/83 and prior to 1/1/97, 6.70%
- (5) After 12/31/96 and prior to 1/1/04, 7.70%
- (6) After 12/31/03, rates as determined by the annual Actuarial Valuation.

Effective January 1, 2014 the Plan is closed to new participants.

Normal Retirement Benefit: Members hired before January 1, 2004 receive the greater of (1) and (2). Members hired after December 31, 2003 and before July 6, 2010 receive (2). Members hired after July 5, 2010 receive (3):

- (1) 3.3% times Average Monthly Earnings times years of service, not to exceed 20 years
- (2) 2.5% times Average Monthly Earnings times years of service, not to exceed 30 years, plus 1.0% times Average Monthly Earnings times years of service in excess of 30 years, not to exceed 10 years
- (3) 2.3333% times Average Monthly Earnings times years of service, not to exceed 30 years, plus 0.5% times Average Monthly Earnings times years of service in excess of 30 years, not to exceed 10 years



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 1 (Continued) Summary of Plan Provisions

Early Retirement Benefit:

If a Member retires early, he is entitled to a return of contributions, less the Membership fee and without interest in the form of a lump sum. A Vested Member may elect a pension to commence at age 60 rather than a refund of his contributions.

Termination Benefit:

If a Member terminates, he is entitled to a return of his contributions, less the Membership fee and without interest in the form of a lump sum. A Vested Member may elect a pension to commence at age 60 rather than a refund of his contributions.

Death Benefit:

If an active Member dies in the course of employment after December 31, 2003, or if an active Vested Member or terminated Vested Member dies after December 31, 2003 while not in the course of employment, a surviving Spouse without surviving Minor children shall receive two-thirds of the Member's annual pension payment commencing immediately and based upon the Salaries and service prior to the date of death (with a minimum service amount of sixty (60) months).

If the Member is survived by a Minor child or Minor children in addition to the surviving Spouse, then the surviving Spouse will receive one-half of the annual pension payment and the Minor children collectively shall receive one-half of the annual pension payment until the age of 18, whereupon, the surviving Spouse shall commence receiving two-thirds of the Members annual pension.

If the surviving Spouse predeceases the Minor children, or there is not a surviving Spouse, the Minor children would receive two-thirds of the Member's annual pension. If there is no surviving Spouse or Minor children, a dependent parent or parents shall receive two-thirds of the Member's annual pension for the remainder of their lifetimes.

Cost of Living Adjustments:

Members receiving pension payments, who have attained age 65, shall have their monthly payment for the next ensuing year increased by 1% over the amount the monthly payment received in the immediately prior December.



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 1 (Continued) Summary of Plan Provisions

Retiree Health Care Supplement:

Upon retirement, Members who were hired before July 6, 2010 and who annually provide proof of health insurance coverage are entitled to a monthly health supplement. The benefit is payable from retirement until age 65.

Members who retire before January 1, 2004 receive 90% of the group blended premium.

Members who retire after December 31, 2003 receive \$7.50 per year of service each month.

Members who were hired after July 5, 2010 receive no Health Care Supplement.

SAMPLE



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 2

Census Summary and Reconciliation

	1/1/17	1/1/18	Percentage Change
<i>Active Members</i>			
▪ Number of Members	254	234	(7.9%)
▪ Average age	44.6	45.3	1.6%
▪ Average service	11.6	12.6	8.6%
▪ Average base salary	\$ 60,242	\$ 63,342	5.1%
<i>Retired Members</i>			
▪ Number of Members	263	266	1.1%
▪ Average age	70.5	70.9	0.6%
▪ Average years since retirement	11.2	11.6	3.6%
▪ Average monthly benefit	\$ 2,508.28	\$ 2,555.04	1.9%
<i>Terminated Vested Members</i>			
▪ Number of Members	31	32	3.2%
▪ Average age	49.1	49.1	0.0%
▪ Average years since termination	6.3	6.4	1.6%
▪ Average monthly benefit at Normal Retirement	\$ 1,773.54	\$ 1,790.28	0.9%
<i>Terminated Non-Vested Members due a refund</i>			
▪ Number of Members	18	20	11.1%
▪ Average refund due	\$ 7,473.83	\$ 7,020.82	(6.1%)



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 2 (Continued) Census Summary and Reconciliation

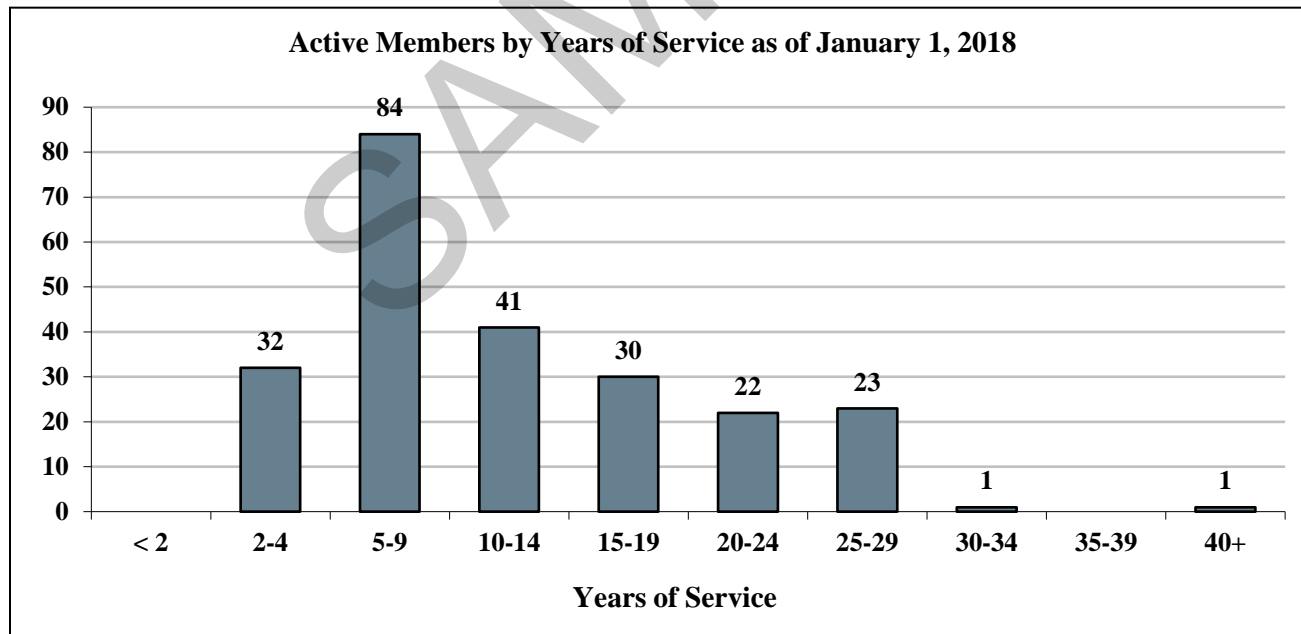
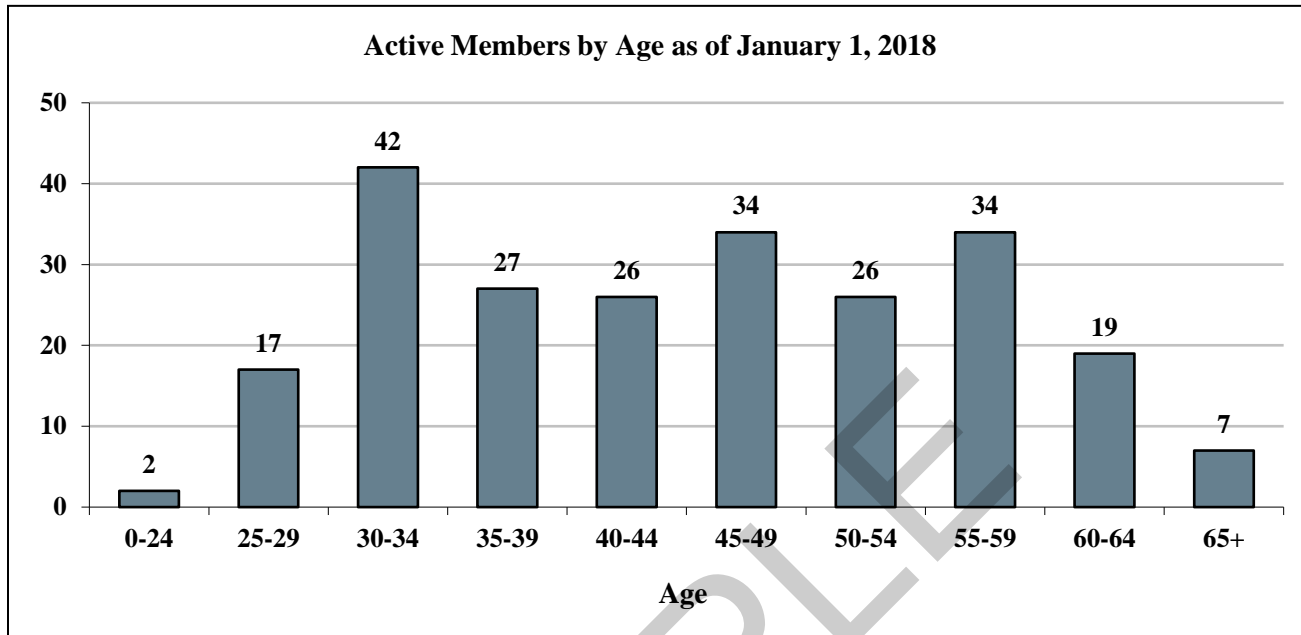
The following information provides the reconciliation from January 1, 2017 to January 1, 2018 of plan Members.

	Active	Terminated Vested	Terminated Non-vested Due Refund	Retired	Disabled	Beneficiary	Total
1/1/2017 Members	254	31	18	215	5	43	566
New Members	-	-	-	-	-	-	0
Rehire	-	-	-	-	-	-	0
Terminated vested	(3)	3	-	-	-	-	0
Terminated non-vested	(6)	-	3	-	-	-	(3)
Retired	(7)	(1)	-	8	-	-	0
Disabled	-	-	-	-	-	-	0
Died with beneficiary	-	(1)	-	(2)	-	3	0
Died without beneficiary	-	-	-	(4)	-	(2)	(6)
Paid-out lump sum	(4)	-	(1)	-	-	-	(5)
Data corrections	-	-	-	-	-	-	0
1/1/2018 Members	234	32	20	217	5	45	553

ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 3

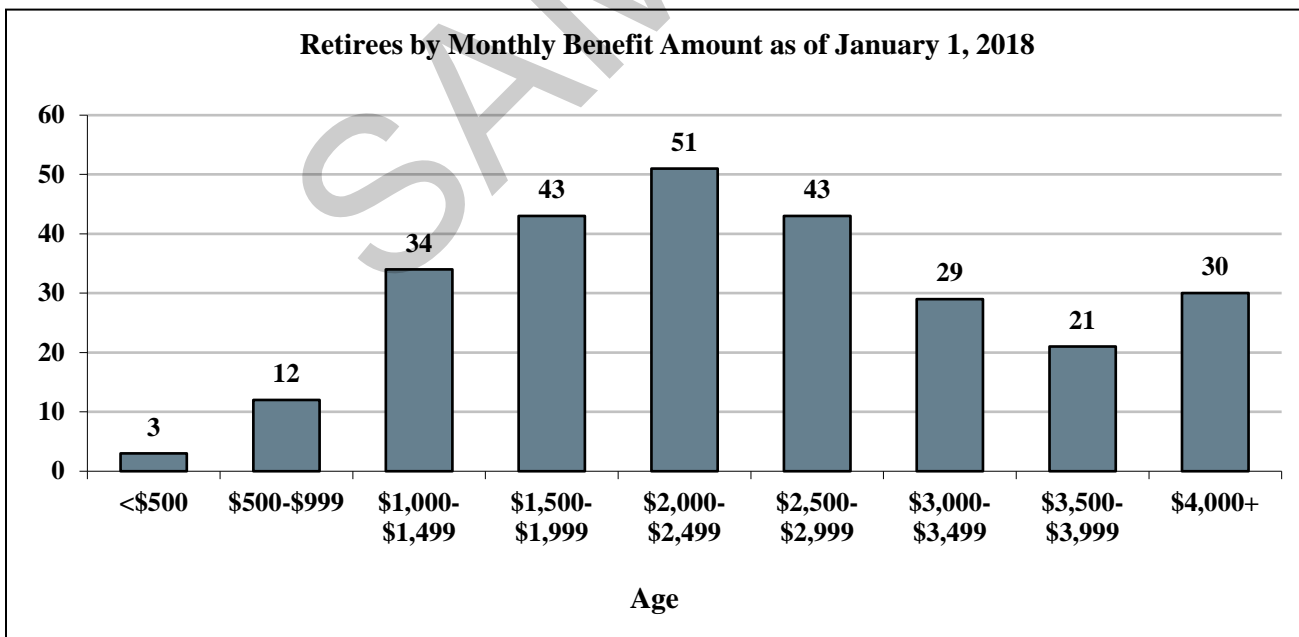
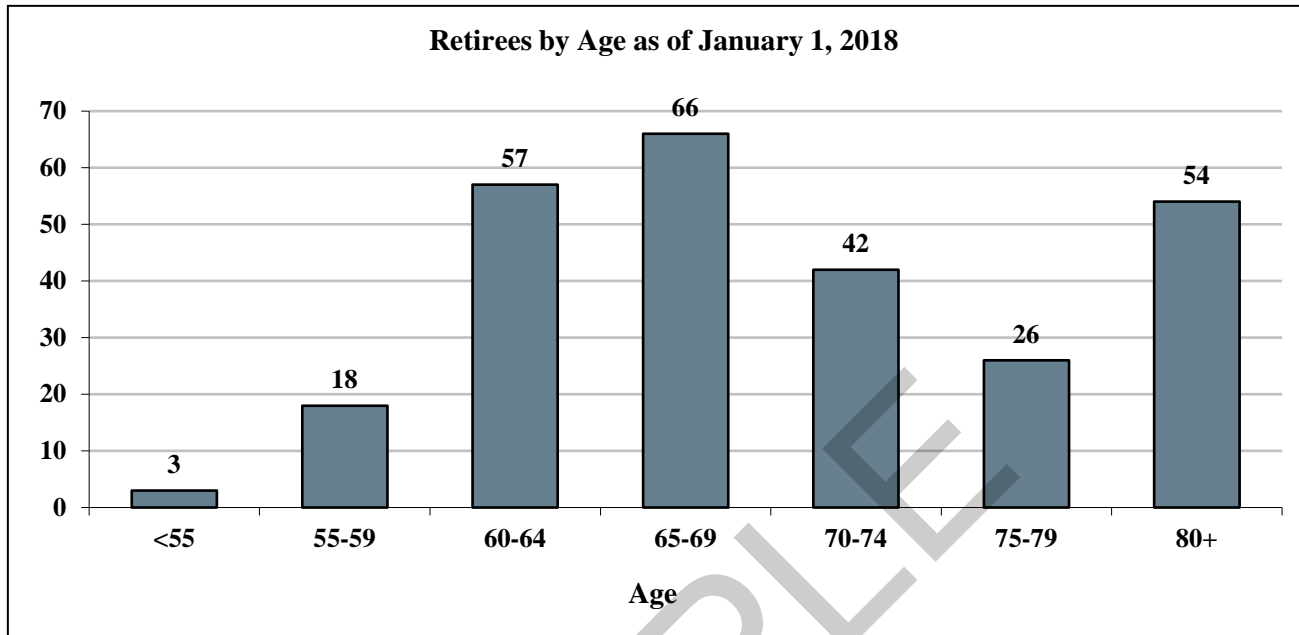
Distribution of Active Members by Age and Service as of January 1, 2018



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 4

Distribution of Retired Members by Age and Monthly Benefit Amount as of January 1, 2018



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 5

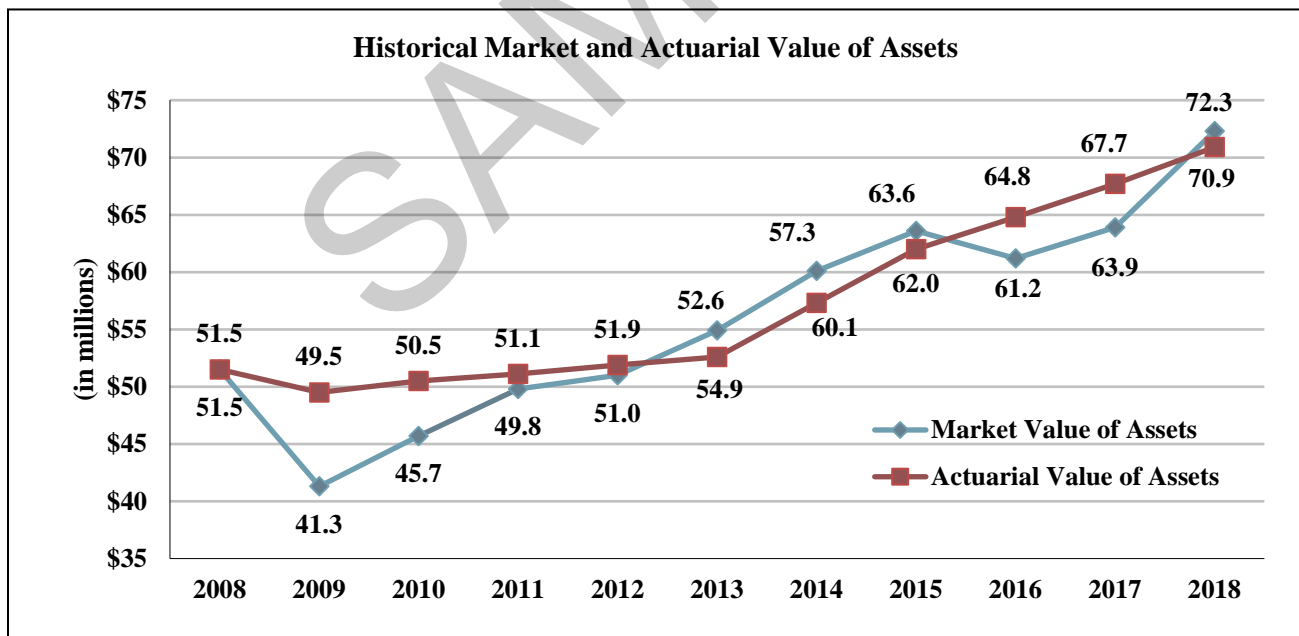
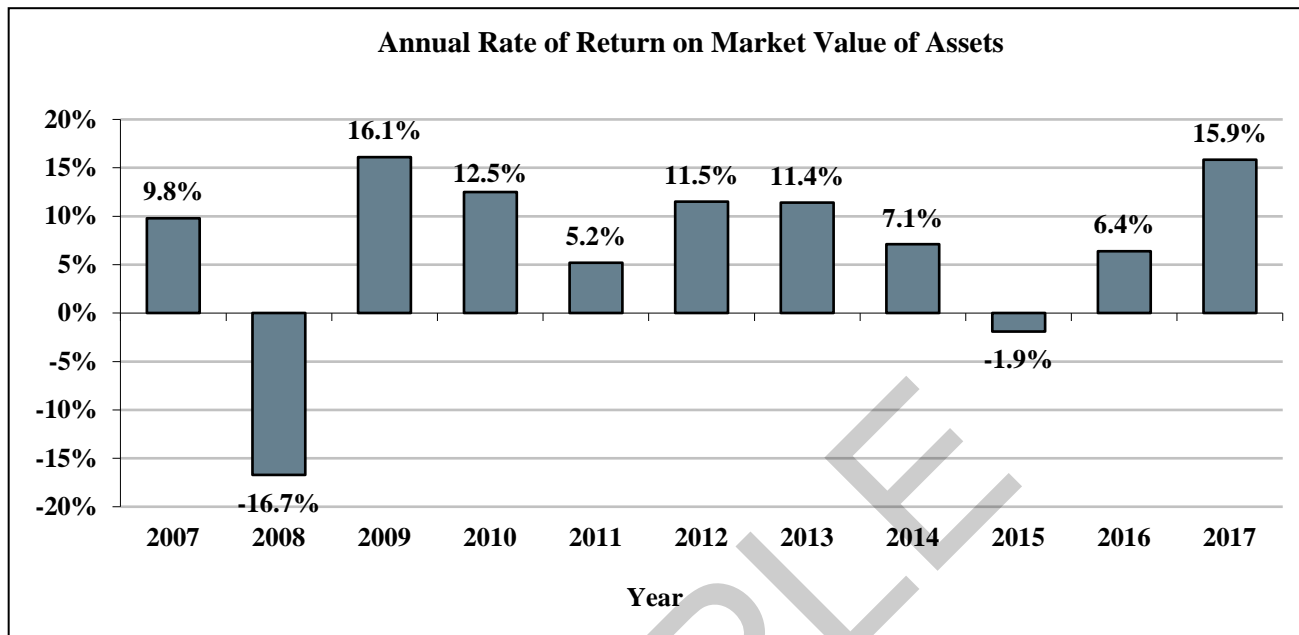
Market Value of Assets Reconciliation

1.	Market Value as of January 1, 2017		\$	63,937,754
2.	Contributions			
(a)	City contributions	\$	4,761,786	
(b)	Employee contributions		<u>2,364,529</u>	
(c)	Total contributions		\$	7,126,315
3.	Investment income			
(a)	Interest and dividends	\$	1,724,734	
(b)	Unrealized gain or (loss)		1,204,472	
(c)	Realized gain or (loss)		<u>7,076,023</u>	
(d)	Total investment income		\$	10,005,229
4.	Benefit payments			
(a)	Retiree benefit payments	\$	8,006,121	
(b)	Employee contribution refunds		<u>409,181</u>	
(c)	Total benefit payments		\$	8,415,302
5.	Retiree Health Care Supplement		\$	179,130
6.	Assurant disability premiums		\$	0
7.	Investment and Administrative expenses		\$	<u>138,656</u>
8.	Market Value as of December 31, 2017: (1)+(2)(c)+(3)(d)-(4)(c)-(5)-(6)-(7)		\$	72,336,210

ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 6

Rates of Return and Historical Values



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 7

Development of Actuarial Value of Assets

Determination of Investment Gain/(Loss)

1. Market Value as of January 1, 2017	\$	63,937,754
2. Actual Benefit Payments, Retiree Health Care Supplements, disability premium, and administrative expenses		(8,733,088)
3. Actual City and Employee Contributions		7,126,315
4. Expected Return at 7.50%		<u>4,736,167</u>
5. Expected Market Value as of December 31, 2017	\$	67,067,148
6. Actual Market Value as of January 1, 2018		<u>72,336,210</u>
7. Asset Gain/(Loss) = (6) – (5)	\$	5,269,062

Determination of Actuarial Value of Assets

1. Market Value as of January 1, 2018	\$	72,336,210
2. Deferred gains/(losses) on assets since January 1, 2013		

(1) Plan Year Ending	(2) Investment Gain/(Loss)	(3) Percent Deferred	(4) Amount Deferred
December 31, 2013	2,139,160	0%	0
December 31, 2014	(255,313)	20%	(51,063)
December 31, 2015	(5,890,159)	40%	(2,356,064)
December 31, 2016	(657,814)	60%	(394,688)
December 31, 2017	<u>5,269,062</u>	80%	<u>4,215,250</u>
Total	604,936		\$ 1,413,435

3. Actuarial Value of Assets as of January 1, 2018: (1) – (2), not more than 20% above or below the Market Value of Assets	\$	70,922,775
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ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 8

Actuarial Assumptions and Methods

Economic Assumptions

Investment Return:

The Fund is assumed to earn 7.50% per year after administration expenses.

Salary Scale:

Active Member Salaries are assumed to increase at rates according to the following table:

Years of Service	Rates
0-4	7.0%
5-12	4.5%
13+	4.0%

Demographic Assumptions

Retirement:

Active Members are assumed to retire according to the following table:

If hired before 7/6/2010:		If hired after 7/5/2010:	
Years after Rule of 85	Rate	Years after Rule of 90 and Age 55	Rate
0-1	50%	0-1	50%
1-2	15%	1-2	15%
2-3	10%	2-3	10%

Members not retiring upon attaining the above criteria are assumed to retire according to the following rate table:

Age	City Employee	Age	Police Employee
60-65	20%	60-61	67%
66	40%	62+	100%
67	60%		
68	80%		
69+	100%		

Mortality:

Mortality rates are based on the RP-2000 Mortality Table with projected future improvements to the valuation date.

Age	Base Mortality Rate (per 1,000)	
	Male	Female
25	0.376	0.207
30	0.444	0.264
35	0.773	0.475
40	1.079	0.706
45	1.508	1.124
50	2.138	1.676
55	3.624	2.717



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 8 (Continued)

Actuarial Assumptions and Methods

Withdrawal:

Active Member withdrawal rates are based on Plan experience between 1/1/06 and 1/1/12.

Age	Police Rate of Withdrawal (per 1,000)		City Rate of Withdrawal (per 1,000)	
	Male	Female	Male	Female
25	140	140	120	80
30	140	140	120	80
35	40	100	30	40
40	40	100	30	40
45	40	100	30	20
50	0	0	30	20
55	0	0	10	10

Spouse Age:

Male Members are assumed to be 3 years older than female Spouses. Female Members are assumed to be 3 years younger than male Spouses.

Marriage Rate:

85% of Members are assumed to be married.

Actuarial Cost Methods

Form of Benefit:

Married Members receive their benefit in the form of a Joint and Two Thirds to Survivor annuity. Single Members receive their benefit in the form of a Life Only annuity.

Actuarial Asset Value:

Market Value with gains and losses smoothed over a 5 year period.

Expenses:

Plan expenses are paid from Plan assets.

Funding Method:

The contribution requirement is determined using the Entry Age Normal actuarial cost method.

Amortization Method:

Level Dollar Amount.

Amortization Period:

30 year closed period (26 years remain as of 1/1/18).



Contribution Information



Arthur J. Gallagher & Co.

ABC CITY EMPLOYEES' PENSION PLAN**EXHIBIT 9****Development of Unfunded Actuarial Accrued Liability**

	1/1/16 to 12/31/16	1/1/17 to 12/31/17
1. Actuarial Accrued Liability as of end of year		
(a) Members receiving benefits		
Retirement benefits	\$ 82,228,452	\$ 84,456,078
Health Care Supplement	553,033	458,064
(b) Terminated vested Members	4,505,766	4,669,065
(c) Terminated Non-vested Member Refunds	134,529	147,437
(d) Active Members		
- Retirement benefits	38,621,380	40,619,541
- Termination benefits	2,283,865	2,405,520
- Death benefits	524,365	527,876
- Health Care Supplement	<u>383,365</u>	<u>405,386</u>
(e) Total	\$ <u>129,234,755</u>	\$ <u>133,688,967</u>
2. Actuarial Value of Assets as of end of year	<u>67,672,392</u>	<u>70,922,775</u>
3. Unfunded Actuarial Accrued Liability as of the end of the year: (1)(e) – (2)	\$ 61,562,363	\$ 62,766,192

ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 10

Development of Actuarial Gain/(Loss) for Plan Year

	1/1/16 to 12/31/16	1/1/17 to 12/31/17
1. Unfunded Liability as of beginning of year	\$ 60,969,834	\$ 61,562,363
2. Normal Cost due beginning of year	2,629,375	2,383,628
3. Interest on (1) and (2) to year end at 7.50%	4,769,941	4,795,949
4. Contribution for year	7,404,752	7,126,315
5. Interest on contribution to year end at 7.50%	<u>277,678</u>	<u>267,237</u>
6. Expected Unfunded Actuarial Accrued Liability as of end of year, (1) + (2) + (3) – (4) – (5)	\$ 60,686,720	\$ 61,348,388
7. Actual Unfunded Liability as of end of year	<u>61,562,363</u>	<u>62,766,192</u>
8. Actuarial gain/(loss) (6) – (7)	\$ (875,643)	\$ (1,417,804)

The \$876,000 loss in 2016 is the net effect of a 1.5% loss on actuarial value of assets and a 0.1% gain on the actuarial accrued liability. The asset loss is the result of continued recognition of market value gains in 2012, and 2013 offset by market value losses in 2014, 2015, and 2016.

The \$1,418,000 loss in 2017 is the net effect of a 0.4% loss on actuarial value of assets and a 0.8% loss on the actuarial accrued liability. The asset loss is the result of continued recognition of market value losses in 2014, 2015, and 2016 offset by market value gains in 2013 and 2017.



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 11

Development of 2019 Recommended City Contribution

	Total Dollars	Percent of Pay
1. Estimated 2019 Normal Cost	\$ 2,258,849	15.19%
2. Estimated 2019 amortization charges	5,262,671	35.38%
3. Estimated 2019 amortization credits	<u>0</u>	<u>0.00%</u>
4. Estimated 2019 total annual recommended contribution	\$ 7,521,520	50.57%
5. Expected Employee contribution	<u>(2,192,380)</u>	<u>(14.74%)</u>
6. Recommended City contribution	\$ 5,329,140	35.83%

The numbers developed above are the expected Employee and recommended City contributions for 2019. They assume that all assumptions are met during the 2018 plan year, including a 7.50% rate of return on actuarial value of assets, and that all expected employee (14.74%) and City (35.70%) contributions are made.

Over the remaining 26 year amortization period, the Normal Cost will trend down significantly as the number of remaining active participants decreases. Expected Employee contributions will also decrease significantly. The amortization charge dollar amount is the annual level dollar amortization amount necessary to fully fund the plan by December 31, 2043, the end of the remaining 26 year amortization period.

Percent of Pay results are based on projected 2019 covered pay of \$14,873,680.



ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 12

Expected Future City Contributions

Year	Unfunded Liability at Beginning of Year	Annual Amortization Payment	Unfunded Liability at End of Year	Annual City Normal Cost Payment	Total City Contribution
2018	\$ 62,766,192	\$ 5,508,553	\$ 61,762,267	\$ 41,291	\$ 5,549,845
2019	61,762,267	5,262,671	60,937,984	66,468	5,329,139
2020	60,937,984	5,262,671	60,051,880	78,916	5,341,586
2021	60,051,880	5,262,671	59,099,318	50,883	5,313,554
2022	59,099,318	5,262,671	58,075,313	13,668	5,276,338
2023	58,075,313	5,262,671	56,974,509	2,239	5,264,909
2024	56,974,509	5,262,671	55,758,470	-	5,262,671
2025	55,758,470	5,262,671	54,419,732	-	5,262,671
2026	54,419,732	5,262,671	52,944,219	-	5,262,671
2027	52,944,219	5,262,671	51,353,583	-	5,262,671
2028	51,353,583	5,262,671	49,633,748	-	5,262,671
2029	49,633,748	5,262,671	47,756,624	-	5,262,671
2030	47,756,624	5,262,671	45,732,793	-	5,262,671
2031	45,732,793	5,262,671	43,548,117	-	5,262,671
2032	43,548,117	5,262,671	41,184,453	-	5,262,671
2033	41,184,453	5,262,671	38,643,912	-	5,262,671
2034	38,643,912	5,262,671	35,917,469	-	5,262,671
2035	35,917,469	5,262,671	32,974,854	-	5,262,671
2036	32,974,854	5,262,671	29,801,841	-	5,262,671
2037	29,801,841	5,262,671	26,391,425	-	5,262,671
2038	26,391,425	5,262,671	22,747,106	-	5,262,671
2039	22,747,106	5,262,671	18,814,684	-	5,262,671
2040	18,814,684	5,262,671	14,605,959	-	5,262,671
2041	14,605,959	5,262,671	10,078,918	-	5,262,671
2042	10,078,918	5,262,671	5,224,433	-	5,262,671
2043	5,224,433	5,262,671	0	-	5,262,671
2044	0	-	-	-	-
2045	-	-	-	-	-

The above schedule shows the expected total City Contributions needed to fund both the cost of active participant benefit accruals (the Annual Normal Cost Payment) and to pay off the Unfunded Liability by December 31, 2043. The above schedule assumes active participants continue to contribute at the 14.74% rate.



Accounting Information



Arthur J. Gallagher & Co.

ABC CITY EMPLOYEES' PENSION PLAN

EXHIBIT 13

Statement of Accumulated Plan Benefits

Actuarial Present Value of Accumulated Plan Benefits:

	1/1/17	1/1/18
Vested Benefits		
▪ Members currently receiving payments	\$ 82,781,485	\$ 84,914,142
▪ Other Members	<u>33,163,729</u>	<u>34,671,770</u>
Total vested benefits	\$ 115,945,214	\$ 119,585,912
Non-vested benefits	<u>2,678,301</u>	<u>2,892,714</u>
Total	\$ 118,623,515	\$ 122,478,626

Statement of Changes in Accumulated Plan Benefits

1. Beginning value, January 1, 2017	\$ 118,623,515
2. Increases (Decreases)	
(a) Plan amendments	\$ 0
(b) Change in actuarial assumptions	0
(c) Benefits accumulated, including experience gains and losses	3,683,518
(d) Increase for interest due to decrease in discount period	8,586,895
(e) Benefits paid	<u>(8,415,302)</u>
(f) Net increase (decrease)	\$ 3,855,111
3. Ending value, January 1, 2018	\$ 122,478,626





Arthur J. Gallagher & Co.
BUSINESS WITHOUT BARRIERS™

Actuarial Certification

GASB Statement Nos. 67 and 68 Disclosures as of December 31, 2017

These exhibits for the ABC City Employees' Pension Plan (the "Plan") are intended to comply with the Government Accounting Standards Board Statements Numbers 67 and 68. Determinations for other purposes may be significantly different from those contained in this report; the results in this report should not be used for other purposes.

Our Actuarial Valuation has been completed with reliance upon participant information and financial information provided by the City. We have reviewed the data provided to us for general reasonableness but did not audit the data. The accuracy of the information in this report is dependent on the quality and completeness of the data provided to us. Each assumption not specified by statute or regulations is reasonable taking into account the experience of the Plan, Plan-specific features, the purpose of the measurement and reasonable expectations.

The actuarial assumptions used in this report were selected by the City, in consultation with Gallagher Benefit Services, Inc. Based on a review of historic experience, Plan-specific features, and anticipated future outlook, the actuarial assumptions not specified by statute or regulation, each and in the aggregate, are reasonably related to the experience of the Plan and reflect a reasonable estimate of anticipated experience under the Plan.

There were no changes in Plan provisions, cost allocation procedures, contribution allocation procedures, assumptions or methods from the previous measurement. There were no adjustments of prior measurements or use of approximations which would materially impact the results. The accrued benefits valued in this report reflect the benefit attribution pattern described by the plan provisions. Please see the January 1, 2018 funding valuation for a description of all assumptions and methods.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. Due to the limited scope of this engagement, we did not complete an analysis of the potential range of such future measurements.

To the best of our knowledge, the information contained in this report is complete, accurate and in accordance with generally accepted actuarial principles as recommended by the American Academy of Actuaries. The actuary is an Enrolled Actuary and is qualified to render the actuarial opinion contained in this report.

Date

Date

ABC City Employees' Pension Plan
Schedule of Contributions - City Allocation

Fiscal Year Ending	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2014	\$ 4,393,114	\$ 4,278,573	\$ 114,541	\$ 15,885,329	26.93%
2015	4,336,002	3,993,088	342,914	15,633,476	25.54%
2016	4,670,155	4,678,695	(8,540)	14,898,704	31.40%
2017	4,764,795	4,520,825	243,970	14,359,978	31.48%

ABC City Employees' Pension Plan

Schedule of Proportionate Share of Net Pension Liability - City Allocation

Fiscal Year Ending	Proportion of the Net Pension Liability	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
2014	92.0500%	\$ 52,902,872	\$ 15,885,329	333%	52.51%
2015	91.8260%	59,323,830	15,633,476	379%	48.63%
2016	91.8533%	59,977,437	14,898,704	403%	49.47%
2017	91.8255%	\$ 56,337,499	14,359,978	392%	54.11%

ABC City Employees' Pension Plan
Schedule of Changes in Net Pension Liability

	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Pension Liability									
Service Cost	\$ 2,383,628	\$ 2,629,375	\$ 2,772,781	\$ 2,926,936	\$ 2,494,847	\$ 1,890,047	\$ 1,747,350	\$ 1,691,113	\$ 1,599,952
Interest	9,549,088	9,316,516	8,987,447	8,647,284	8,152,245	7,722,223	7,287,536	7,026,707	6,685,310
Changes of benefit terms	0	0	0	0	0	(844,807)	0	0	0
Differences between expected and actual experience	1,115,928	(129,360)	912,914	930,846	2,962,696	(953,947)	3,280,780	829,710	1,779,866
Changes of assumptions	0	0	0	0	0	7,789,632	0	0	0
Benefit payments, including refunds of member contributions	(8,594,432)	(8,345,228)	(7,939,080)	(7,691,728)	(7,190,974)	(7,114,893)	(6,584,119)	(5,892,331)	(5,610,006)
Net change in total pension liability	\$ 4,454,212	\$ 3,471,303	\$ 4,734,062	\$ 4,813,338	\$ 6,418,814	\$ 8,488,255	\$ 5,731,547	\$ 3,655,199	\$ 4,455,122
Total Pension Liability--Beginning	129,234,755	125,763,452	121,029,390	116,216,052	109,797,238	101,308,983	95,577,436	91,922,237	87,467,115
Total Pension Liability--Ending (a)	\$ 133,688,967	\$ 129,234,755	\$ 125,763,452	\$ 121,029,390	\$ 116,216,052	\$ 109,797,238	\$ 101,308,983	\$ 95,577,436	\$ 91,922,237
Plan fiduciary net position									
Contributions--employer	\$ 4,761,786	\$ 4,943,357	\$ 4,250,241	\$ 4,520,993	\$ 3,730,936	\$ 3,157,460	\$ 3,034,945	\$ 2,518,191	\$ 1,905,577
Contributions--member	2,364,529	2,461,395	2,635,549	2,705,235	2,682,638	2,270,093	2,348,218	2,073,480	1,906,527
Net investment income	10,005,230	3,888,252	(1,168,638)	4,222,235	6,215,647	5,754,509	2,546,113	5,603,313	6,486,227
Benefit payments, including refunds of member contributions	(8,594,432)	(8,345,228)	(7,939,080)	(7,691,728)	(7,190,974)	(7,114,893)	(6,584,119)	(5,892,331)	(5,610,006)
Administrative expense	(138,656)	(168,872)	(176,725)	(252,270)	(235,822)	(216,387)	(194,617)	(198,419)	(194,715)
Other	0	0	0	0	0	0	0	0	0
Net change in plan fiduciary net position	\$ 8,398,457	\$ 2,778,904	\$ (2,398,653)	\$ 3,504,465	\$ 5,202,425	\$ 3,850,782	\$ 1,150,540	\$ 4,104,234	\$ 4,493,610
Plan fiduciary net position--beginning	63,937,754	61,158,850	63,557,503	60,053,038	54,850,613	50,999,831	49,849,291	45,745,057	41,251,447
Plan fiduciary net position--ending (b)	\$ 72,336,211	\$ 63,937,754	\$ 61,158,850	\$ 63,557,503	\$ 60,053,038	\$ 54,850,613	\$ 50,999,831	\$ 49,849,291	\$ 45,745,057
Net Pension Liability (asset)--ending (a) - (b)	\$ 61,352,756	\$ 65,297,001	\$ 64,604,602	\$ 57,471,887	\$ 56,163,014	\$ 54,946,625	\$ 50,309,152	\$ 45,728,145	\$ 46,177,180

Note: Prior to 2009 the plan was split between City and Police and aggregate data is not available.

Discount Rate used to measure the Total Pension Liability

7.50%

Sensitivity of the Net Pension Liability to changes in the Discount Rate

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Net Pension Liability	\$ 76,820,448	\$ 61,352,756	\$ 48,373,411

ABC City Employees' Pension Plan
Schedule of Net Pension Liability

	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Pension Liability	\$ 133,688,967	\$ 129,234,755	\$ 125,763,452	\$ 121,029,390	\$ 116,216,052	\$ 109,797,238	\$ 101,308,983	\$ 95,577,436	\$ 91,922,237
Plan fiduciary net position	<u>72,336,211</u>	<u>63,937,754</u>	<u>61,158,850</u>	<u>63,557,503</u>	<u>60,053,038</u>	<u>54,850,613</u>	<u>50,999,831</u>	<u>49,849,291</u>	<u>45,745,057</u>
Net pension liability (asset)	<u>\$ 61,352,756</u>	<u>\$ 65,297,001</u>	<u>\$ 64,604,602</u>	<u>\$ 57,471,887</u>	<u>\$ 56,163,014</u>	<u>\$ 54,946,625</u>	<u>\$ 50,309,152</u>	<u>\$ 45,728,145</u>	<u>\$ 46,177,180</u>
Plan fiduciary net position as a percentage of the total pension liability	54.11%	49.47%	48.63%	52.51%	51.67%	49.96%	50.34%	52.16%	49.76%
Covered Payroll	15,545,784	16,071,691	17,357,716	18,018,692	17,478,994	14,432,827	15,013,531	13,762,691	13,264,828
Net pension liability (asset) as a percentage of covered payroll	394.66%	406.29%	372.20%	318.96%	321.32%	380.71%	335.09%	332.26%	348.12%

Note: Prior to 2009 the plan was split between City and Police and aggregate data is not available.

SAMPLE

ABC City Employees' Pension Plan
Schedule of Contributions

	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	\$ 5,188,965	\$ 5,084,364	\$ 4,721,976	\$ 4,772,530	\$ 3,503,687	\$ 2,514,668	\$ 2,270,161	\$ 2,109,607	\$ 2,010,737
Contributions in relation to the actuarially determined contribution	<u>4,761,786</u>	<u>4,943,357</u>	<u>4,250,241</u>	<u>4,520,993</u>	<u>3,730,936</u>	<u>3,157,460</u>	<u>3,034,945</u>	<u>2,518,191</u>	<u>1,905,577</u>
Contribution deficiency (excess)	<u>\$ 427,179</u>	<u>\$ 141,007</u>	<u>\$ 471,735</u>	<u>\$ 251,537</u>	<u>\$ (227,249)</u>	<u>\$ (642,792)</u>	<u>\$ (764,784)</u>	<u>\$ (408,584)</u>	<u>\$ 105,160</u>
Covered Payroll	15,545,784	16,071,691	17,357,716	18,018,692	17,478,994	14,432,827	15,013,531	13,762,691	13,264,828
Contributions as a percentage of covered payroll	30.63%	30.76%	24.49%	25.09%	21.35%	21.88%	20.21%	18.30%	14.37%

SAMPLE

ABC City Employees' Pension Plan
Schedule of Investment Returns

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Annual money-weighted rate of return, net of investment expenses	15.9%	6.4%	-1.9%	7.1%	11.4%	11.5%	5.2%	12.5%	16.1%	-16.7%

SAMPLE

ABC City Employees' Pension Plan

Components of Pension Expense for the Fiscal Year Ended December 31, 2017

Description	Amount
Service Cost	\$ 2,383,628
Interest on the total pension liability	9,549,088
Differences between expected and actual experience	1,149,157
Changes of assumptions	1,298,272
Employee contributions	(2,364,529)
Projected earnings on pension plan investments	(4,735,078)
Differences between projected and actual earnings on plan investments	(121,522)
Pension plan administrative expenses	138,656
Other changes in fiduciary net position	(0)
	<u>\$ 7,297,672</u>

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Projected earnings on pension plan investments				
Beginning plan fiduciary net position	\$ 63,937,754	100%	7.50%	\$ 4,795,332
Employer contributions	4,761,786	50%	7.50%	178,567
Employee contributions	2,364,529	50%	7.50%	88,670
Benefit payments, including refunds of employee contributions	(8,594,432)	50%	7.50%	(322,291)
Administrative expense and other	(138,656)	50%	7.50%	(5,200)
Total projected earnings				<u>\$ 4,735,078</u>

	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Interest on the Total Pension Liability (a) x (b) x (c)
Interest cost on total pension liability				
Beginning total pension liability	\$ 129,234,755	100%	7.50%	\$ 9,692,607
Service cost	2,383,628	100%	7.50%	178,772
Benefit payments, including refunds of employee contributions	(8,594,432)	50%	7.50%	(322,291)
Total interest on the total pension liability				<u>\$ 9,549,088</u>

ABC City Employees' Pension Plan

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Year	Differences Between Expected and Actual Experience	Recognition Period (Years)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2009	\$ 1,779,866	6.9	\$ 257,952	\$ 257,952	\$ 257,952	\$ 257,952	\$ 232,154						
2010	829,710	6.6	125,714	125,714	125,714	125,714	125,714	75,426					
2011	3,280,780	6.5	504,735	504,735	504,735	504,735	504,735	504,735	252,370				
2012	(953,947)	6.0		(158,991)	(158,991)	(158,991)	(158,991)	(158,991)	(158,992)				
2013	2,962,696	6.2			477,854	477,854	477,854	477,854	477,854	477,854	95,572		
2014	930,846	5.5				169,245	169,245	169,245	169,245	169,245	84,621		
2015	912,914	5.0					182,583	182,583	182,583	182,583	182,582		
2016	(129,360)	4.7						(27,523)	(27,523)	(27,523)	(27,523)	(19,268)	
2017	1,115,928	4.4							253,620	253,620	253,620	253,620	101,448
Net Increase (decrease) in pension expense			888,401	729,410	1,207,264	1,376,509	1,533,294	1,223,329	1,149,157	1,055,779	588,872	234,352	101,448

Deferred outflows of resources and deferred inflows of resources arising from differences between expected and actual experience

			Balances at December 31, 2017		
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through December 31, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2011	3,280,780		\$ 3,280,780	\$ -	\$ -
2012		\$ (953,947)	(953,947)	-	-
2013	2,962,696		2,389,270	573,426	-
2014	930,846		676,980	253,866	-
2015	912,914		547,749	365,165	-
2016		(129,360)	(55,046)	-	(74,314)
2017	1,115,928		253,620	862,308	-
				<u>\$ 2,054,765</u>	<u>\$ (74,314)</u>

ABC City Employees' Pension Plan

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

Year	Changes of Assumptions	Recognition Period (Years)	2011	2012	2013	2014	2015	2016	2017	2018	2019
2009	\$ 0	6.9									
2010	0	6.6									
2011	0	6.5									
2012	7,789,632	6.0		1,298,272	1,298,272	1,298,272	1,298,272	1,298,272	1,298,272		
2013	0	6.2									
2014	0	5.5									
2015	0	5.0									
2016	0	4.7									
2017	0	4.4									
Net Increase (decrease) in pension expense			-	1,298,272	1,298,272	1,298,272	1,298,272	1,298,272	1,298,272	-	-

Deferred outflows of resources and deferred inflows of resources arising from changes of assumptions

Balances at December 31, 2017					
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through December 31, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2012	7,789,632		7,789,632	-	-
				\$ -	\$ -

ABC City Employees' Pension Plan

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Year	Differences Between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2013	2014	2015	2016	2017	2018	2019	2020	2021
2009	\$ (3,365,013)	5	\$ (673,001)								
2010	(2,115,077)	5	(423,015)	(423,017)							
2011	1,264,138	5	252,828	252,828	252,826						
2012	(1,874,415)	5	(374,883)	(374,883)	(374,883)	(374,883)					
2013	(2,139,160)	5	(427,832)	(427,832)	(427,832)	(427,832)	(427,832)				
2014	255,313	5		51,063	51,063	51,063	51,063	51,061			
2015	5,889,325	5			1,177,865	1,177,865	1,177,865	1,177,865	1,177,865		
2016	657,061	5				131,412	131,412	131,412	131,412	131,413	
2017	(5,270,152)	5					(1,054,030)	(1,054,030)	(1,054,030)	(1,054,030)	(1,054,032)
Net Increase (decrease) in pension expense			<u>(1,645,903)</u>	<u>(921,841)</u>	<u>679,039</u>	<u>557,625</u>	<u>(121,522)</u>	<u>306,308</u>	<u>255,247</u>	<u>(922,617)</u>	<u>(1,054,032)</u>

Deferred outflows of resources and deferred inflows of resources arising from differences between expected and actual experience

Balances at December 31, 2017					
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through December 31, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2013		(2,139,160)	\$ (2,139,160)	\$ -	\$ -
2014	255,313		204,252	51,061	
2015	5,889,325		3,533,595	2,355,730	
2016	657,061		262,824	394,237	
2017		(5,270,152)	(1,054,030)		\$ (4,216,122)
				<u>\$ 2,801,028</u>	<u>\$ (4,216,122)</u>

ABC City Employees' Pension Plan

Deferred Outflows of Resources and Deferred Inflows of Resources

Source	Balances at December 31, 2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 2,054,765	\$ (74,314)
Changes of assumptions	-	-
Net difference between projected and actual earnings on investments	-	(1,415,094)
Total	2,054,765	(1,489,408)

Deferred outflows of resources and deferred inflows of resources will be recognized in pension expense as follows:

Year	
2018	\$ 1,362,087
2019	844,119
2020	(688,265)
2021	(952,584)
2022	-
Thereafter	-

ABC City

*GASB No. 43 & No. 45
Actuarial Valuation*

January 1, 2017



Arthur J. Gallagher & Co.

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ABC City GASB No. 43 & No. 45 Actuarial Valuation

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ACTUARIAL CERTIFICATION

In our opinion, the following report presents fairly the January 1, 2017 Actuarial Valuation of the ABC City (the City) postemployment benefits other than pensions (OPEB) and has been prepared in accordance with Statement No. 43 and Statement No. 45 of the Governmental Accounting Standards Board (GASB) and with generally accepted actuarial principles and practices. Actuarial computations under GASB No. 43 and GASB No. 45 are for plan and employer accounting and financial reporting requirements. Determination for purposes other than meeting employer and plan accounting and financial reporting requirements may be significantly different from the results reported in this valuation.

This valuation has been conducted with reliance upon information provided to us by the City regarding participant data, plan provisions, and other matters. The accuracy of information in this valuation is dependent on the quality and completeness of the information provided to us. We have reviewed the information provided to us for general reasonableness. This valuation was performed on the basis of the participant data, plan provisions, actuarial assumptions, and actuarial methods stated in this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. Due to the limited scope of this engagement, we did not complete an analysis of the potential range of such future measurements.

To the best of our knowledge, the information contained in this report is complete, accurate and in accordance with generally accepted actuarial principles as recommended by the American Academy of Actuaries. The actuary indicated below is an Enrolled Actuary and is qualified to render the actuarial opinion contained in this report.

Enrollment Number 14-07346

Actuarial Analyst

Date

Date

EXECUTIVE SUMMARY

The tables below highlight the January 1, 2017 and January 1, 2018 liabilities and the January 1, 2017 to December 31, 2017 and January 1, 2018 to December 31, 2018 annual costs for the City's Other Postemployment Benefits (OPEB) as prescribed under GASB No. 43 and No. 45.

Actuarial Assets and Liabilities

	January 1, 2017	January 1, 2018 ⁽¹⁾
Actuarial Value of Assets	\$ 991,494	\$ 1,004,075
Actuarial Present Value of Benefits	\$ 1,321,202	\$ 1,317,029
Actuarial Accrued Liability	\$ 1,060,657	\$ 1,072,381

⁽¹⁾ These values are based on plan provisions as of January 1, 2017 and projected plan assets as of January 1, 2018. If the plan provisions change significantly or actual plan assets as of January 1, 2018 are significantly different than projected, a January 1, 2018 valuation may be required.

The Actuarial Value of Assets is the value of assets irrevocably dedicated to the plan for providing future benefits to participants after employment.

The Actuarial Present Value of Benefits is the present value of all expected future benefits, claims and administration costs for participants less contributions paid by participants after employment.

The Actuarial Accrued Liability is the portion of the Actuarial Present Value of Benefits attributed to an employee's past service.

Annual Costs

	Fiscal Year Ending December 31, 2017	Fiscal Year Ending December 31, 2018
Annual Required Contribution	\$ 41,482	\$ 41,482
Annual OPEB Cost	\$ 41,979	\$ 42,016
Annual Expected Pay-As-You-Go Cost	\$ 99,596	\$ 108,775

The Annual Required Contribution (ARC) is the periodic required contribution to fund the postemployment healthcare benefits of both active and inactive participants. The ARC includes both the value of benefits earned during the year (Normal Costs) and an amortization of the Unfunded Actuarial Accrued Liability (UAAL). Although there is no requirement to contribute the ARC, it serves as the starting point for the Annual OPEB Cost.

The Annual OPEB Cost is the amount the employer charges as the cost of the postemployment healthcare benefits on its income statement each fiscal year. If there is no Net OPEB Obligation on the financial statements then the Annual OPEB Cost is equal to the ARC. However, if there is a Net OPEB Obligation, then the Annual OPEB Cost reflects adjustments for the Net OPEB Obligation previously recognized and interest.

The Annual Expected Pay-As-You-Go Cost is the expected claims and administration costs less deductibles, coinsurance and contributions for inactive participants during the fiscal year.



GOVERNMENTAL ACCOUNTING STANDARDS NO. 43 & NO. 45 BACKGROUND

Background

The Governmental Accounting Standards Board (GASB) issued Statements No. 43 and No. 45 in April and June 2004, respectively. GASB No. 43 and GASB No. 45 address the liabilities associated with Other Postemployment Benefits (OPEB) that are not pensions. OPEB primarily relates to retiree health care, but may include other benefits such as life insurance, disability, and long-term care. GASB No. 43 addresses the financial reporting for postemployment benefit plans other than pension plans and is generally applicable once a qualified trust is implemented for pre-funding OPEB. GASB No. 45 addresses the accounting and financial reporting by employers for postemployment benefits other than pensions.

GASB No. 43 and No. 45 require changing from a pay-as-you-go basis to accrual basis accounting for postretirement benefits other than pensions. Under accrual basis accounting, employers recognize a portion of the total liabilities during each fiscal year as an expense. This fiscal year expense considers liabilities accrued to date, as well as benefits earned during the current fiscal year.

GASB No. 43 and No. 45 is phased-in based on the annual revenue of the employer for the fiscal year ending after June 15, 1999. GASB No. 45 is effective for fiscal years beginning after December 15, 2006 for employers with \$100 million or more in revenue, December 15, 2007 for employers with \$10 million or more but less than \$100 million in revenue, and December 15, 2008 for employers with less than \$10 million in revenue. In general, GASB No. 43 is effective one year earlier than GASB No. 45 for plans that are prefunded in an OPEB trust.

The City established an OPEB trust and implemented GASB No. 43 and GASB No. 45 in fiscal year 2008.

Participant Data

Participant census data and claims experience for the City is summarized in the Summary of Plan Participants and the Summary of Actuarial Assumptions and Methods sections of this report.

Plan Provisions

Plan provisions describe the arrangement that an employer has undertaken to provide its employees with benefits after they retire. Provisions of the plan may be written, spoken, or implied by a well-defined practice of paying postemployment benefits. The plan provisions for the ABC City's OPEB Plan are summarized in the Summary of Plan Provisions section of this report.

Actuarial Assumptions and Methods

Actuarial assumptions and methods used in determining GASB No. 43 and No. 45 liabilities are selected in accordance with established actuarial standards. Each actuarial assumption, such as turnover, retirement, disability, mortality, dependency status, spouse age differential, participant election, per capita claims costs, healthcare cost trend rates and discount rate, is used to estimate the occurrence of future events affecting postemployment benefit costs. Actuarial assumptions and methods used in this valuation are described in the Summary of Actuarial Assumptions and Methods sections of this report.



Liabilities and Annual Costs



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LIABILITIES AND ANNUAL COSTS

Actuarial Present Value of Benefits (PVB)	January 1, 2017
1. Active Participants	
a. Employee Benefits	\$ 887,391
b. Spouse Benefits	<u>0</u>
c. Total	\$ 887,391
2. Inactive participants	
a. Retiree Benefits	\$ 433,811
b. Spouse Benefits	<u>0</u>
c. Total	\$ 433,811
3. Total Actuarial Present Value of Benefits	\$ 1,321,202

LIABILITIES AND ANNUAL COSTS

Funded Status and Funding Progress	January 1, 2017
1. Actuarial Accrued Liability	
a. Active participants	\$ 626,846
b. Inactive participants	<u>433,811</u>
c. Total	\$ 1,060,657
2. Actuarial Value of Plan Assets ⁽¹⁾	<u>991,494</u>
3. Unfunded Actuarial Accrued Liability (UAAL), (1) – (2)	\$ 69,163
4. Funded ratio, (2)/(1)	93.5%
5. Estimated covered payroll	\$ 14,900,000
6. UAAL as a percentage of covered payroll	0.5%
7. 27-year level dollar amortization of UAAL	\$ 5,623

⁽¹⁾ The development of assets is shown in the Statement of Plan Net Assets and Statement of Changes of Plan Net Assets on page 10.



LIABILITIES AND ANNUAL COSTS

Change in Actuarial Accrued Liability	Total
1. Actuarial Accrued Liability at January 1, 2015	\$ 1,045,699
2. Change due to:	
a. Expected program experience	\$ 29,656
b. Demographic experience	26,262
c. Assumption changes	(40,960)
d. Plan amendments	<u>0</u>
e. Net increase/(decrease)	\$ 14,958
3. Actuarial Accrued Liability at January 1, 2017	\$ 1,060,657

Changes in Actuarial Accrued Liability (AAL) may occur from assumptions not being met or changes in assumptions. The following changes in AAL are related to assumptions:

1. Change in retiree contributions less than expected	\$ (13,927)
2. Change in per capita claims costs less than expected	(58,045)
3. Health Care Cost Trend Impact	<u>31,012</u>
4. Net increase/(decrease)	(40,960)



LIABILITIES AND ANNUAL COSTS

Annual Required Contribution and Annual OPEB Cost	FYE 2017	FYE 2018
1. Normal Cost	\$ 32,965	\$ 32,965
2. Amortization of Unfunded Actuarial Accrued Liability	5,623	5,623
3. Interest adjustment (assumes end of year)	<u>2,894</u>	<u>2,894</u>
4. Annual Required Contribution	\$ 41,482	\$ 41,482
5. Interest on the beginning of year Net OPEB Obligation/(Asset)	(2,999)	(2,962)
6. Annual Required Contribution adjustment	<u>3,496</u>	<u>3,496</u>
7. Annual OPEB Cost/(Income)	\$ 41,979	\$ 42,016

FUNDING PROGRESS AND CONTRIBUTIONS

Schedule of Funding Progress						
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b – a) / c]
January 1, 2008	\$ 0	\$ 1,485,924	\$ 1,485,924	0.0%	\$11,800,000	12.6%
January 1, 2009	(7,607)	1,881,683	1,889,290	(0.4%)	11,500,000	16.4%
January 1, 2010	90,079	2,003,167	1,913,088	4.5%	11,800,000	16.2%
January 1, 2011	286,836	2,524,963	2,238,127	11.4%	13,300,000	16.8%
January 1, 2012	510,513	2,679,242	2,168,729	19.1%	13,700,000	15.8%
January 1, 2013 ¹	766,792	2,843,885	2,077,093	27.0%	13,700,000	15.2%
January 1, 2014	1,044,145	2,906,678	1,862,533	35.9%	14,100,000	13.2%
January 1, 2015	1,143,320	1,045,699	(97,621)	109.3%	16,700,000	(0.6%)
January 1, 2016	1,071,699	1,063,175	(8,524)	100.8%	16,700,000	(0.1%)
January 1, 2017	991,494	1,060,657	69,163	93.5%	14,900,000	0.5%

Schedule of Employer Contributions			
Year Ended	Annual Required Contribution (a)	Employer Contribution (b)	Percentage Contributed (b / a)
December 31, 2008	\$ 143,021	\$ 143,021	100.0%
December 31, 2009	196,192	196,192	100.0%
December 31, 2010	199,872	199,872	100.0%
December 31, 2011	254,085	279,805	110.1%
December 31, 2012	252,590	252,590	100.0%
December 31, 2013 ¹	248,901	248,901	100.0%
December 31, 2014	238,913	253,150	106.0%
December 31, 2015	32,958	32,958	100.0%
December 31, 2016	40,568	40,568	100.0%
December 31, 2017	41,482	TBD	TBD

¹ Reflects changes in assumptions resulting from experience study.

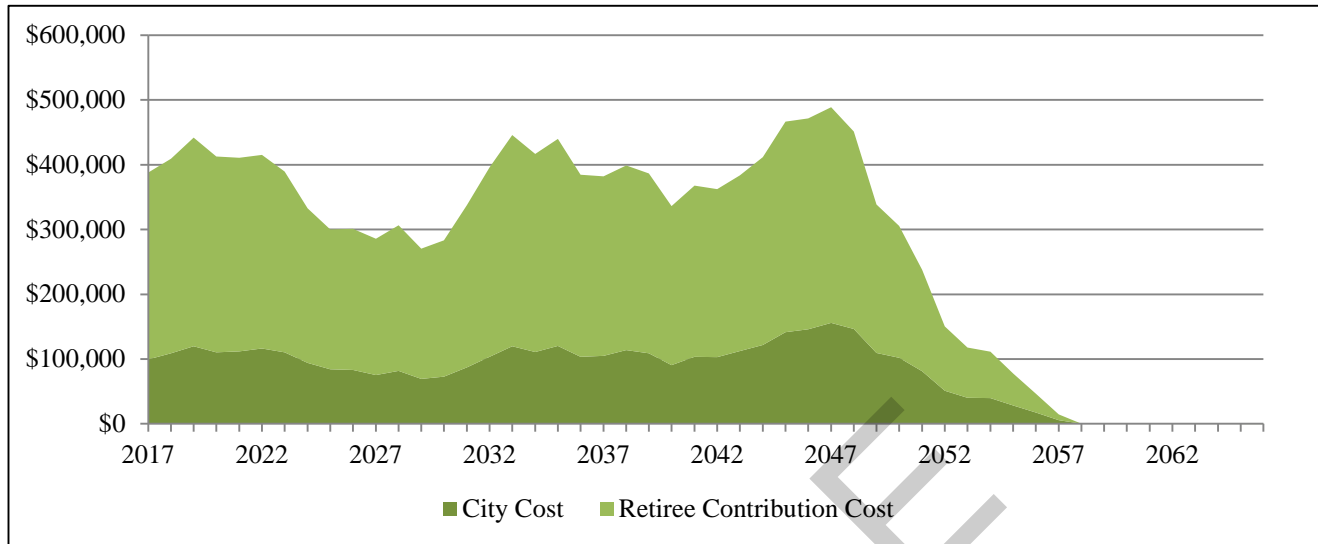
Pay-As-You-Go Cost Projections



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PAY-AS-YOU-GO COST PROJECTIONS



FYE	Implicit Rate Subsidy			City Portion of Group Premium	Pay-As-You-Go Cost: (c) + (d)
	(a) Per Capita Claims Costs	(b) Group Premium	(c) Total: (a) – (b)		
2017	\$ 388,051	\$ 288,455	\$ 99,596	\$ 0	\$ 99,596
2018	409,258	300,483	108,775	0	108,775
2019	441,587	321,881	119,706	0	119,706
2020	412,560	302,192	110,368	0	110,368
2021	410,645	298,984	111,661	0	111,661
2026	301,187	217,840	83,347	0	83,347
2031	337,527	250,166	87,361	0	87,361
2036	384,474	280,958	103,516	0	103,516
2041	367,561	264,283	103,278	0	103,278
2046	471,657	325,539	146,118	0	146,118
2051	237,834	156,781	81,053	0	81,053
2056	46,408	28,940	17,468	0	17,468
2061	0	0	0	0	0
2066	0	0	0	0	0

The above pay-as-you-go cost projections do not include any anticipated future hires and only include the participants as of January 1, 2017 (closed group projections).

**Governmental Accounting Standards
No. 43 & No. 45 Requirements**



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GOVERNMENTAL ACCOUNTING STANDARDS NO. 43 & NO. 45 REQUIREMENTS

The information below is required for Note Disclosures and Required Supplementary Information for employer and Plan reporting.

Statement of Plan Net Assets (as of 1/1/2017)			
1. Assets			
a. Cash and cash equivalents		\$	(174,175)
b. Investments, at fair value			
i. Money market	\$	29,233	
ii. Equities/stock		661,484	
iii. Fixed income		400,701	
iv. Alternative		<u>74,251</u>	
v. Total		\$	1,165,669
c. Accounts receivable		\$	<u>0</u>
d. Total		\$	991,494
2. Liabilities - Accounts payable to other funds		\$	<u>0</u>
3. Net Assets for OPEB		\$	991,494

Statement of Changes in Plan Net Assets (2015 and 2016)			
1. Additions			
a. Contributions – employer		\$	73,527
b. Contributions – retirees			947,555
c. Investment income			
i. Net appreciation	\$	151	
ii. Interest and dividends		<u>43,568</u>	
iii. Total			<u>43,719</u>
d. Total additions		\$	1,064,801
2. Deductions			
a. Benefits		\$	1,192,664
b. Expenses			<u>23,963</u>
c. Total deductions		\$	1,216,627
3. Net increase/(decrease)		\$	(151,826)
4. Net assets held for OPEB			
a. January 1, 2015		\$	1,143,320
b. January 1, 2017		\$	991,494



GOVERNMENTAL ACCOUNTING STANDARDS NO. 43 & NO. 45 REQUIREMENTS

The information below is required for Note Disclosures and Required Supplementary Information for employer and Plan reporting. This information is based on a 7.50% discount rate, ARC funding, Entry Age Normal level percent of pay actuarial cost method, 27-year closed level dollar amortization of the UAAL. Actuarial valuations are required every two years unless plan changes are made that impact results. Therefore, FYE 2018 results shown below assume no changes occur that would impact results.

Notes to the Financial Statements	2016	2017	2018 ⁽²⁾
1. Net OPEB Obligation (NOO)			
a. Annual Required Contribution (ARC)	\$ 40,568	\$ 41,482	\$ 41,482
b. Interest on NOO	(3,034)	(2,999)	(2,962)
c. Adjustment to ARC	<u>3,496</u>	<u>3,496</u>	<u>3,496</u>
d. Annual OPEB Cost	\$ 41,030	\$ 41,979	\$ 42,016
e. Employer contributions ⁽¹⁾	<u>(40,568)</u>	<u>(41,482)</u>	<u>(41,482)</u>
f. Increase (decrease) in NOO	\$ 462	\$ 497	\$ 534
g. NOO beginning of year	<u>(40,455)</u>	<u>(39,993)</u>	<u>(39,496)</u>
h. NOO end of year	\$ (39,993)	\$ (39,496)	\$ (38,962)
2. Schedule of Employer Contributions			
a. Annual OPEB Costs	\$ 41,030	\$ 41,979	\$ 42,016
b. Employer contributions ⁽¹⁾	40,568	41,482	41,482
c. Percentage contributed	99%	99%	99%

Required Supplementary Information	1/1/2016	1/1/2017	1/1/2018 ⁽²⁾
1. Schedule of Funding Progress			
a. Actuarial Accrued Liability (AAL)	\$ 1,063,175	\$ 1,060,657	\$ 1,072,381
b. Actuarial Value of Plan Assets	<u>1,071,699</u>	<u>991,494</u>	<u>1,004,075⁽³⁾</u>
c. Unfunded AAL,(a) – (b)	\$ (8,524)	\$ 69,163	\$ 68,306
d. Funded ratio, (b) / (a)	100.8%	93.5%	93.6%
e. Estimated covered payroll	\$ 16,700,000	\$ 14,900,000	\$ 14,900,000
f. UAAL as a percent of payroll, (c)/(e)	(0.1%)	0.5%	0.5%

⁽¹⁾ Employer contributions are assumed to be equal to the Annual Required Contribution.

⁽²⁾ The January 1, 2018 actuarial accrued liability and 2018 annual cost are projected using the 1/1/17 census data, plan provisions and actuarial assumptions in this report.

⁽³⁾ The January 1, 2018 assets are projected based on anticipated contributions, benefit payments and 7.50% expected return on assets.



Input Information



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ABC CITY – GASB No. 43 & No. 45**INPUT INFORMATION - Summary of Plan Participants**

The following table summarizes the counts by health insurance coverage, average age, average service, and average compensation of active benefits eligible employees as of the January 1, 2017 valuation date.

Active Participants		Total
By Health Insurance Coverage		
▪ Single		121
▪ Single + Dependent (SPD)		21
▪ Family		49
▪ Waived		<u>42</u>
▪ Total		233
Averages		
▪ Age of participant		44.6
▪ Service (City)		11.6
▪ Annual compensation		\$ 60,890

INPUT INFORMATION - Summary of Plan Participants (Continued)

The following table summarizes the counts by health insurance coverage and member type and average ages of inactive participants and their covered spouses as of the January 1, 2017 valuation date.

Inactive Participants	Total
By Health Insurance Coverage	
▪ Single	38
▪ Single + Dependent (SPD)	1
▪ Family	<u>11</u>
▪ Total	50
By Member Type	
▪ Retiree	48
▪ Disabled	0
▪ Spouse	11
▪ Surviving Spouse	<u>2</u>
▪ Total	61
Averages	
▪ Age of participant	62
▪ Age of covered spouse	60

INPUT INFORMATION - Summary of Plan Participants (Continued)

The following tables provide the reconciliation of benefits eligible participants from January 1, 2015 to January 1, 2015 and age/service scatters of active participants as of January 1, 2017.

Participant Reconciliation				
	Actives with Coverage	Actives Waiving Coverage	Inactives with Coverage	Total
1/1/2015 Participants	236	46	61	343
Hired	-	-	-	0
Rehired	-	-	-	0
Terminated	(28)	(10)	-	(38)
Retired	(10)	-	10	0
Waived coverage	(8)	8	-	0
Ended coverage	-	-	(20)	(20)
Added coverage	2	(2)	1	1
Died	(1)	-	(2)	(3)
Data corrections	-	-	-	-
1/1/2017 Participants	191	42	50	283

Age/Service Scatters								
Age	Years of City Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
0-19	-	-	-	-	-	-	-	0
20-24	5	-	-	-	-	-	-	5
25-29	15	5	1	-	-	-	-	21
30-34	10	28	1	-	-	-	-	39
35-39	8	10	7	2	-	-	-	27
40-44	3	4	7	9	3	-	-	26
45-49	3	3	6	7	8	2	-	29
50-54	3	4	7	3	1	9	-	27
55-59	7	4	8	5	6	7	-	37
60-64	5	6	1	2	1	1	-	16
65+	-	-	2	1	1	1	1	6
Total	59	64	40	29	20	20	1	233

INPUT INFORMATION - Summary of Plan Provisions (Post-Retirement Medical Plan)

This summary of plan provisions has been prepared for valuation purposes only. It outlines the plan provisions necessary to perform the Actuarial Valuation.

Eligibility Requirements

- Employees (excluding the Park District employees) of the ABC City participating in the City's group health insurance plan (medical and prescription drugs), who retire under the ABC City Employees' Pension Plan, may continue to participate in the City's group health insurance plan after retirement.
- ABC City Employees' Pension Plan retirement eligibility:
 - Employees hired before July 7, 2010
 - Age 60 with 5 Years of Service, or Rule of 85 with 5 Years of Service
 - Employees hired after July 6, 2010
 - Age 60 with 10 Years of Service, or Rule of 90 with age 55 minimum

The plan was closed to new entrants effective January 1, 2014

Length of Coverage

- Retirees and spouses are eligible to continue coverage in the City's group health insurance plan until they attain age 65, provided the above eligibility requirements are met and applicable premiums are paid. Retirees or spouses that elect not to continue health coverage, at any time, are not eligible to re-enroll in the City's group health insurance plan.
- Retirees that initially obtained spouse coverage may drop spouse coverage and maintain coverage for themselves; retirees may not drop coverage for themselves and maintain spouse coverage (spouses are allowed to maintain coverage if the retiree has reached age 65 and enrolled in the MSP).
- Spouses may maintain coverage until age 65 if the retiree should die.

2017 Participant Contributions

Retirees and spouses covered in the City's group health insurance plan (SC 250) are required to contribute the following monthly group health insurance plan (SC 250) premiums effective January 1, 2017:

▪ Single	\$ 589.38
▪ Single + Dependent (SPD)	1,037.19
▪ Family	1,532.19

INPUT INFORMATION - Summary of Plan Provisions (Post-Retirement Medical Plan - Continued)

Benefits Summary – Effective January 1, 2017

SC 250 Plan	In-Network	Out-of-Network
Deductible		
▪ Retiree	\$250	\$500
▪ Retiree plus Dependent (SPD)	\$375	\$750
▪ Family	\$500	\$1,000
Out-of-Pocket Maximum		
▪ Retiree	\$1,250	\$2,500
▪ Retiree plus Dependent (SPD)	\$1,875	\$3,750
▪ Family	\$2,500	\$5,000
Lifetime Maximum	Unlimited	Unlimited
Wellness Services	100% after \$25 copay	No Coverage
Office Visits	90% after \$25 copay	80% after \$25 copay
Hospital Services – Inpatient	90%	80%
Hospital Services – Outpatient (Scheduled)	90%	80%
Prescription Drugs		
▪ Outpatient Coinsurance Maximum	\$1,000 per member	
▪ Formulary – Generic	100% after \$10 copay	
▪ Formulary – Brand Name	80% after \$10 copay	
▪ Non-Formulary	50% after \$10 copay	



INPUT INFORMATION - Summary of Plan Provisions (Healthcare Supplement)

Eligibility Requirement

- Employees hired on or before July 6, 2010 who meet the retirement eligibility requirements for the ABC City Employees' Pension Plan, are eligible for the Healthcare Supplement. Employees hired after July 6, 2010 are not eligible for the Healthcare Supplement.
- ABC City Employees' Pension Plan retirement eligibility for employees hired before July 7, 2010
 - Age 60 with 5 Years of Service, or Rule of 85 with 5 Years of Service

Benefit Amount

- Employees of the City who retire under the ABC City Employees' Pension Plan before January 1, 2004 and annually provide proof of health insurance coverage receive a monthly healthcare supplement equal to the City's portion of the group-blended premium for an active employee with single coverage. Currently, the City contributes 90% of the group blended premium for an active employee with single coverage (i.e. \$530.44 per month).
- Employees who retire under the ABC City Employees' Pension Plan after December 31, 2003 receive a monthly healthcare supplement equal to \$7.50 per year of service.

Length of Coverage

Retirees are eligible to receive the healthcare supplement until they attain age 65, provided the above eligibility requirements are met.

GASB Statement Nos. 25 and 27

These healthcare supplement benefits are not accounted for in this valuation (i.e., valued under GASB Statements No. 43 and 45), rather they are accounted for in the pension plan valuation (i.e., valued under GASB Statements No. 25 and 27). The healthcare supplement benefits are not valued under GASB Statements No. 43 and 45 because they are not effectively restricted to the payment of health insurance. Since they are not effectively restricted to the payment of health insurance, they are considered retirement income and are valued under GASB Statements No. 25 and 27.



INPUT INFORMATION - Actuarial Assumptions and Methods

The actuarial assumptions used in this Actuarial Valuation were based on actual City experience and developed through discussions with the City, or were drawn from the 2006-2011 ABC City Employees' Pension Plan Experience Study.

Valuation Date

January 1, 2017

Benefits Valued

Pre-65 medical and prescription drug coverage are valued.

Post-65 medical and prescription drug coverage is not valued because retirees participating in the City sponsored Medicare Supplemental Plan are required to contribute the full Medicare Supplemental Plan premium which is assumed to cover their full cost of coverage.

Dental coverage is not valued because retirees are required to contribute the full COBRA dental rate which is assumed to cover their full cost of coverage.

Discount Rate

7.50% (ARC Funding)

Investment Rate of Return

7.50%

Salary Increase Rates

Salaries are assumed to increase according to the following table:

Years of Service	Rates
0 - 4	0.070
5 - 12	0.045
13 +	0.040

Marriage Rates

85% of employees are assumed to be married.

Spouse Age Differential

Males are assumed to be 3 years older than female spouses; females are assumed to be 3 years younger than male spouses.

INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)**Health Insurance Elections**

80% of City employees are assumed to elect medical coverage at retirement.

60% of married City employees electing medical coverage at retirement are assumed to elect medical coverage for their spouse.

Current retirees are assumed to continue with their current medical coverage (i.e., Retiree, Retiree + Dependent, or Family).

Withdrawal Rates

Based on City experience.

Non-Police			Police		
Age	Male Rates	Female Rates	Age	Male Rates	Female Rates
< 35	0.12	0.08	< 35	0.14	0.14
35 – 39	0.03	0.04	35 – 39	0.04	0.10
40 - 44	0.03	0.04	40 - 44	0.04	0.10
45 – 49	0.03	0.02	45 – 49	0.04	0.10
50 - 54	0.03	0.02	50 - 54	0.00	0.00
55 +	0.01	0.01	55 +	0.00	0.00

Retirement Rates

Active Members are assumed to retire according to the following table:

If hired before 7/6/2010		If hired after 7/5/2010	
Years after Rule of 85	Rates	Years after Rule of 90 and Age 55	Rates
0 - 1	0.50	0 - 1	0.50
1 - 2	0.15	1 - 2	0.15
2 - 3	0.10	2 - 3	0.10

Members not retiring upon attaining the above criteria are assumed to retire according to the following rates:

Non-Police		Police	
Age	Rates	Age	Rates
60 - 65	0.20	60 – 61	0.67
66	0.40	62+	1.00
67	0.60		
68	0.80		
69+	1.00		

INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)

Disability Rates

None assumed

Mortality Rates**Non-Disabled Participants:** RP-2000 Table with projected future improvements using scale AA**Disabled Participants:** Rates as shown in the following table:

Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.02054	0.01709	50	0.04537	0.03363	80	0.13360	0.08472
21	0.02030	0.01744	51	0.04769	0.03440	81	0.13854	0.09001
22	0.01994	0.01784	52	0.04998	0.03504	82	0.14394	0.09571
23	0.01940	0.01815	53	0.05229	0.03568	83	0.14988	0.10179
24	0.01875	0.01839	54	0.05460	0.03635	84	0.15615	0.10818
25	0.01813	0.01853	55	0.05690	0.03701	85	0.16253	0.11480
26	0.01761	0.01859	56	0.05915	0.03763	86	0.16884	0.12159
27	0.01734	0.01872	57	0.06122	0.03826	87	0.17496	0.12848
28	0.01733	0.01904	58	0.06339	0.03887	88	0.18091	0.13542
29	0.01754	0.01942	59	0.06601	0.03986	89	0.18668	0.14240
30	0.01794	0.01984	60	0.06922	0.04122	90	0.19232	0.14938
31	0.01847	0.02029	61	0.07279	0.04272	91	0.20537	0.16289
32	0.01908	0.02071	62	0.07578	0.04380	92	0.21905	0.17721
33	0.01978	0.02107	63	0.07801	0.04436	93	0.23341	0.19234
34	0.02053	0.02141	64	0.07931	0.04430	94	0.24846	0.20828
35	0.02135	0.02169	65	0.08219	0.04527	95	0.26327	0.22418
36	0.02224	0.02195	66	0.08516	0.04641	96	0.27768	0.23980
37	0.02324	0.02226	67	0.08816	0.04768	97	0.29151	0.25495
38	0.02433	0.02269	68	0.09118	0.04907	98	0.30460	0.26937
39	0.02550	0.02326	69	0.09429	0.05068	99	0.31678	0.28284
40	0.02676	0.02398	70	0.09299	0.05063	100	0.32945	0.29698
41	0.02814	0.02482	71	0.09546	0.05223	101	0.34263	0.31183
42	0.02966	0.02577	72	0.09956	0.05469	102	0.35633	0.32742
43	0.03126	0.02678	73	0.10368	0.05737	103	0.37059	0.34379
44	0.03291	0.02780	74	0.10781	0.06026	104	0.38541	0.36098
45	0.03468	0.02886	75	0.11203	0.06349	105	0.40083	0.37903
46	0.03658	0.02990	76	0.11633	0.06711	106	0.41686	0.39799
47	0.03867	0.03092	77	0.12059	0.07102	107	0.43353	0.41788
48	0.04085	0.03189	78	0.12471	0.07525	108	0.45088	0.43878
49	0.04309	0.03279	79	0.12900	0.07981	109	0.46891	0.46072
						110	0.48767	0.48375
						111+	1.00000	1.00000



INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)**Per Capita Claims and Administrative Costs**

Medical and prescription drug per capita claims and administration costs were developed based on the following:

- SC 250 Plan claims experience (including prescription drugs), fees, and administration costs for the City's employees and retirees from January 1, 2014 through December 31, 2016.
- Claims experience was adjusted for healthcare cost trend, age-sex differentials between employees and retirees.

The 2017 per capita claims and administrative costs below are used in this January 1, 2017 valuation. The 2015 per capita claims and administrative costs below were used in the January 1, 2015 valuation and included for comparative purposes.

Per Capita Claims and Administrative Costs (PCCC)								
Age	2015 Valuation PCCC	2017 Valuation PCCC	Age	2015 Valuation PCCC	2017 Valuation PCCC	Age	2015 Valuation PCCC	2017 Valuation PCCC
40	\$ 3,654	\$ 4,220	50	\$ 5,564	\$ 6,422	60	\$ 8,049	\$ 9,288
41	3,811	4,401	51	5,803	6,697	61	8,300	9,578
42	3,975	4,590	52	6,052	6,984	62	8,559	9,877
43	4,146	4,787	53	6,312	7,284	63	8,826	10,185
44	4,324	4,992	54	6,546	7,553	64	9,099	10,500
45	4,510	5,206	55	6,788	7,832	65+	N/A	N/A
46	4,704	5,429	56	7,039	8,122			
47	4,906	5,662	57	7,299	8,422			
48	5,116	5,905	58	7,569	8,734			
49	5,335	6,158	59	7,805	9,007			

INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)**Healthcare Cost Trend Rates**

Trend rates are used to project health insurance claims and administration costs and retiree premiums into the future. If healthcare inflation were to continue at its current rate, eventually 100% of the Gross National Product (GNP) would be allocated for healthcare services. Since this is unrealistic, healthcare cost trend rates are assumed to decrease in future years. The following table provides the healthcare cost trend rates for future years.

Fiscal Year Beginning	January 1, 2015 Valuation	January 1, 2017 Valuation
2015	8.50%	N/A
2016	8.00%	N/A
2017	7.50%	8.50%
2018	7.00%	8.00%
2019	6.50%	7.50%
2020	6.00%	7.00%
2021	5.50%	6.50%
2022	5.00%	6.00%
2023	5.00%	5.50%
2024+	5.00%	5.00%

Cadillac Tax Impact

We estimate that the 40% excise tax will be payable beginning in the year 2037.

Actuarial Cost Methods

Entry Age Normal level percent of pay. The Unfunded Actuarial Accrued Liability (UAAL) and subsequent changes in UAAL due to gains/losses are amortized as a level dollar over a 30-year closed amortization period.

Actuarial Value of Assets

Market value



**Governmental Accounting Standards
No. 43 & No. 45 Definitions**



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GOVERNMENTAL ACCOUNTING STANDARDS NO. 43 & NO. 45 DEFINITIONS

Actuarial Accrued Liability (AAL)

As of a particular date, the AAL is the portion of the Actuarial Present Value of Benefits attributed to an employee's past service.

Actuarial Cost Methods

The determination of the Annual Required Contribution (ARC) is based upon the selection of an actuarial cost method. The purpose of an actuarial cost method is to provide a systematic approach to allocating benefit costs to an employee's active working lifetime. Cost methods will result in different contribution patterns, but each method will result in the same level of funding at the end of an employee's working lifetime. Any of six different actuarial cost methods are considered acceptable. The six different cost methods are called Entry Age Normal, Frozen Entry Age, Attained Age, Frozen Attained Age, Projected Unit Credit, and Aggregate.

An actuarial cost method has three functions. First, it will determine what liabilities are attributable to past service and what liabilities are attributable to future service. All liabilities for a retiree will be attributable to past service regardless of the cost method elected. However, different cost methods will allocate different liability amounts to past and future service for active employees.

The second function of an actuarial cost method regards how actuarial gains or losses are recognized. When actual results differ from expected results, an actuarial gain or loss will occur. Under an "immediate gain" method (Entry Age Normal, Attained Age, and Projected Unit Credit) the gain or loss will become part of the past service liability. Under a "spread gain" method (Frozen Entry Age, Frozen Attained Age, and Aggregate), the gain or loss will become part of the future service liability.

The third function of an actuarial cost method is to spread the past service and future service liabilities over periods of time to determine the ARC. Past service liabilities are amortized over a period of time not to exceed 30 years. Future service liabilities are spread over the expected working lifetime of active participants.

Actuarial Present Value of Benefits (PVB)

As of a particular date, the Actuarial Present Value of Benefits is the present value of all expected future benefits, claims and administration costs for participants less contributions paid by participants after employment.

Actuarial Value of Assets (AVA)

The Actuarial Value of Assets is the value of assets irrevocably dedicated to the plan for providing future benefits to participants after employment.

Agent Multiple-Employer Plan

A group of single-employer plans that share administrative costs and functions.



GOVERNMENTAL ACCOUNTING STANDARDS NO. 43 & NO. 45 DEFINITIONS

Annual OPEB Cost

The Annual OPEB Cost is the amount the employer charges as the cost of the postemployment healthcare benefits on its income statement each fiscal year. If there is no Net OPEB Obligation on the financial statements, then the Annual OPEB Cost is equal to the ARC. However, if there is a Net OPEB Obligation, then the Annual OPEB Cost reflects adjustments for the Net OPEB Obligation previously recognized and interest.

Annual Required Contribution (ARC)

The Annual Required Contribution (ARC) is the periodic required contribution to fund the postemployment healthcare benefits (medical and prescription drug) of both active and inactive participants, calculated in accordance with GASB No. 45. The ARC includes both the value of benefits earned during the year (Normal Costs) and an amortization of the Unfunded Actuarial Accrued Liability (UAAL). Although there is no requirement to contribute the ARC, it serves as the starting point for the Annual OPEB Cost.

Closed Amortization Period

An amount is amortized over a specific number of years that decreases to zero with the passage of time. For example, if the amortization period is initially 30 years then 29 years remain after the first year, 28 after the second year, and so forth.

Cost-Sharing Multiple Employer Plan

A plan where benefits and administrative costs and functions are shared among all participating employers.

Group Premium Cost-Sharing

An amount the employer pays towards the Group Premium that is charged to a Retiree to participate in the employer-sponsored plan.

Implicit Rate Subsidy

The benefit a retiree receives equal to the difference between the medical and prescription drug expected claims costs for retirees and the Group Premium.

Level Dollar Amortization Method

Amortization payments are calculated so that they are a constant amount, when expressed as a dollar amount, over the amortization period.

Net OPEB Obligation (NOO)

The cumulative difference, including interest, between (a) the employer's required contributions in accordance with the plan's actuarially determined funding requirements and (b) the contributions made by the employer in relation to the required contributions.



GOVERNMENTAL ACCOUNTING STANDARDS NO. 43 & NO. 45 DEFINITIONS

Normal Cost

The portion of the Actuarial Present Value of Benefits expected to be earned during the year, and allocated to the year, pursuant to the actuarial assumptions and methods used.

Open Amortization Period

An amount is amortized over a specific number of years and begins again or is recalculated at each actuarial valuation date. The period may increase, decrease, or remain stable.

Percentage of Payroll Amortization Method

Amortization payments are calculated so that they are a constant amount, when expressed as a percentage of payroll, over the amortization period.

Single Employer Plan

A plan that provides benefits to the current and former employees, including beneficiaries, of a single employer only.

Unfunded Actuarial Accrued Liability (UAAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.



ABC City

*GASB No. 74 & No. 75
Actuarial Valuation*

December 31, 2017



Arthur J. Gallagher & Co.

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ABC City GASB No. 74 & No. 75 Actuarial Valuation

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ACTUARIAL CERTIFICATION

In our opinion, the following report presents fairly the January 1, 2017 Actuarial Valuation of the ABC City (the City) postemployment benefits other than pensions (OPEB) and has been prepared in accordance with Statement No. 74 and Statement No. 75 of the Governmental Accounting Standards Board (GASB) and with generally accepted actuarial principles and practices. Actuarial computations under GASB No. 74 and GASB No. 75 are for plan and employer accounting and financial reporting requirements. Determination for purposes other than meeting employer and plan accounting and financial reporting requirements may be significantly different from the results reported in this valuation.

This valuation has been conducted with reliance upon information provided to us by the City regarding participant data, plan provisions, and other matters. The accuracy of information in this valuation is dependent on the quality and completeness of the information provided to us. We have reviewed the information provided to us for general reasonableness. This valuation was performed on the basis of the participant data, plan provisions, actuarial assumptions, and actuarial methods stated in this report.

There were no changes in Plan provisions, cost allocation procedures, assumptions or methods from the previous measurement. There were no adjustments of prior measurements or use of approximations which would materially impact the results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. Due to the limited scope of this engagement, we did not complete an analysis of the potential range of such future measurements.

To the best of our knowledge, the information contained in this report is complete, accurate and in accordance with generally accepted actuarial principles as recommended by the American Academy of Actuaries. The actuary indicated below is an Enrolled Actuary and is qualified to render the actuarial opinion contained in this report.

Date

Date

EXECUTIVE SUMMARY

The tables below highlight the December 31, 2016 and December 31, 2017 assets and liabilities and the January 1, 2017 to December 31, 2017 annual costs for the City's Other Postemployment Benefits (OPEB) as prescribed under GASB Statements No. 74 & No. 75.

Assets and Liabilities

	December 31, 2016	December 31, 2017
Actuarial Present Value of Benefits (PVB)	\$ 1,321,202	\$ 1,265,703
Total OPEB Liability (TOL)	1,060,657	1,021,054
Plan Fiduciary Net Position	991,494	1,035,882
Net OPEB Liability (NOL)	69,163	(14,828)

The Actuarial Present Value of Benefits is the present value of all expected future benefits, claims and administration costs for participants less contributions paid by participants after employment. The Total OPEB Liability is the portion of the Actuarial Present Value of Benefits attributed to an employee's past service, based on the Entry Age Normal cost method.

The Plan Fiduciary Net Position is the value of assets irrevocably dedicated to the plan for providing future benefits to participants after employment. The Net OPEB Liability is the unfunded portion of the Total OPEB Liability.

Annual Costs

	Fiscal Year Ending December 31, 2016	Fiscal Year Ending December 31, 2017
Service Cost	\$ N/A	\$ 32,965
OPEB Expense	N/A	33,708
Actuarially Determined Contribution	N/A	41,482
Annual Expected Pay-As-You-Go Cost	N/A	149,002

The OPEB Expense is the amount the employer charges as the cost of the postemployment healthcare benefits on its income statement each fiscal year. It includes the value of benefits earned during the year (Service Costs), amortization of unrecognized gains and losses, and interest on the Net OPEB Liability. There is no requirement to contribute the OPEB Expense.

The Actuarially Determined Contribution is the recommended contribution to fully fund postemployment healthcare benefits of both active and inactive participants.

The Annual Expected Pay-As-You-Go Cost is the expected claims and administration costs less deductibles, coinsurance and contributions for inactive participants during the fiscal year.



GOVERNMENTAL ACCOUNTING STANDARDS NO. 74 & NO. 75 BACKGROUND

Background

The Governmental Accounting Standards Board (GASB) approved Statements No. 74 and No. 75 in June 2015. GASB No. 74 and GASB No. 75 replace the requirements of Statements No. 43 and No. 45, and address the liabilities associated with Other Postemployment Benefits (OPEB) that are not pensions.

GASB No. 74 addresses the financial reporting for postemployment benefit plans other than pension plans and is effective for plan fiscal years beginning after June 15, 2016. GASB No. 75 addresses the accounting and financial reporting by employers for postemployment benefits other than pensions and is effective for employer fiscal years beginning after June 15, 2017.

GASB Statements No. 74 and No. 75 include many significant changes from Statements No. 43 and No. 45, including: new discount rate methodology, requirement to use Entry Age Normal cost method, more rapid recognition of actuarial gains and losses and changes in actuarial assumptions in OPEB Expense, immediate recognition of plan changes in OPEB expense, two year valuation requirement for plans with 100 or more participants and additional sensitivity measurements regarding discount rate and trend rate sensitivity.

The City established an OPEB trust and implemented GASB No. 43 and GASB No. 45 in fiscal year 2008. The City implemented GASB No. 74 and No. 75 in fiscal year 2017.

Participant Data

Participant census data and claims experience for the City is summarized in the Summary of Plan Participants and the Summary of Actuarial Assumptions and Methods sections of this report.

Plan Provisions

Plan provisions describe the arrangement that an employer has undertaken to provide its employees with benefits after they retire. Provisions of the plan may be written, spoken, or implied by a well-defined practice of paying postemployment benefits. The plan provisions for the City are summarized in the Summary of Plan Provisions section of this report.

Actuarial Assumptions and Methods

Actuarial assumptions and methods used in determining GASB No. 74 and No. 75 liabilities are selected in accordance with established actuarial standards. Each actuarial assumption, such as turnover, retirement, disability, mortality, dependency status, spouse age differential, participant election, per capita claims costs, healthcare cost trend rates and discount rate, is used to estimate the occurrence of future events affecting postemployment benefit costs. Actuarial assumptions and methods used in this valuation are described in the Summary of Actuarial Assumptions and Methods sections of this report.



Liabilities and Annual Costs



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SCHEDULE OF NET OPEB LIABILITY

	<u>2016</u>	<u>2017</u>
Total OPEB Liability	\$ 1,060,657	\$ 1,021,054
Plan fiduciary net position	<u>991,494</u>	<u>1,035,882</u>
Net OPEB liability (asset)	\$ 69,163	\$ (14,828)
Plan fiduciary net position as a percentage of the total OPEB liability	93.5%	101.5%
Covered-employee Payroll	\$ 16,700,000	\$ 14,900,000
Net OPEB liability (asset) as a percentage of covered-employee payroll	0.4%	-0.1%

Sensitivity of the Net OPEB Liability to changes in the Discount Rate

	<u>1% Increase</u>	<u>Current Discount Rate</u>	<u>1% Decrease</u>
Total OPEB Liability	\$ 940,834	\$ 1,021,054	\$ 1,110,871
Plan fiduciary net position	<u>1,035,882</u>	<u>1,035,882</u>	<u>1,035,882</u>
Net OPEB Liability	\$ (95,048)	\$ (14,828)	\$ 74,989

Sensitivity of the Net OPEB Liability to changes in the Healthcare Trend Rates

	<u>1% Increase</u>	<u>Current Trend Rates</u>	<u>1% Decrease</u>
Total OPEB Liability	\$ 1,128,260	\$ 1,021,054	\$ 928,984
Plan fiduciary net position	<u>1,035,882</u>	<u>1,035,882</u>	<u>1,035,882</u>
Net OPEB Liability	\$ 92,378	\$ (14,828)	\$ (106,898)

SCHEDULE OF CHANGES IN NET OPEB LIABILITY

Schedule of Changes in Net OPEB Liability

	2016	2017
Total OPEB Liability		
Service Cost	N/A \$	32,965
Interest	N/A	76,434
Changes of benefit terms	N/A	-
Differences between expected and actual experience	N/A	-
Changes of assumptions	N/A	-
Benefit payments (net)	N/A	(149,002)
Net change in total OPEB liability	N/A \$	(39,603)
Total OPEB Liability--Beginning	N/A	1,060,657
Total OPEB Liability--Ending (a)	1,060,657	1,021,054
Plan fiduciary net position		
Contributions - Employer	N/A \$	41,482
Net investment income	N/A	165,108
Benefit payments (net)	N/A	(149,002)
Administrative expense	N/A	(13,200)
Other	N/A	-
Net change in plan fiduciary net position	N/A \$	44,388
Plan fiduciary net position--beginning	N/A	991,494
Plan fiduciary net position--ending (b)	\$ 991,494	\$ 1,035,882
Net OPEB Liability (asset)--ending (a) - (b)	\$ 69,163	\$ (14,828)

ABC CITY – GASB No. 74 & No. 75**SCHEDULE OF CONTRIBUTIONS**

	2016	2017
Actuarially determined contribution	\$ 40,568	\$ 41,482
Contributions in relation to the actuarially determined contribution	<u>40,568</u>	<u>41,482</u>
Contribution deficiency (excess)	\$ -	\$ -
Covered-employee Payroll	16,700,000	14,900,000
Contributions as a percentage of covered-employee payroll	0.2%	0.3%

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SCHEDULE OF INVESTMENT RETURNS

Schedule of Investment Returns

	2016	2017
Annual money-weighted rate of return, net of investment expenses	5.31%	17.73%
Allocation		
Cash and cash equivalents	(174,175)	-
Investments		
Money market	29,233	47,739
Equity/stocks	661,484	700,692
Fixed income	400,701	381,438
Alternative	74,251	68,215
Total investments	991,494	1,198,084
Total liabilities (due to other funds)	-	(162,202)
Plan fiduciary net position--ending	991,494	1,035,882

SAMPLE



ABC CITY – GASB No. 74 & No. 75

OPEB EXPENSE FOR FISCAL YEAR ENDED DECEMBER 31, 2017

	FYE 2017
Service Cost	\$ 32,965
Interest on the total OPEB liability	76,433
Differences between expected and actual experience	-
Changes of assumptions	-
Projected earnings on OPEB plan investments	(69,835)
Differences between projected and actual earnings on plan investments	(19,055)
OPEB plan administrative expenses	13,200
Other changes in fiduciary net position	-
	<u>\$ 33,708</u>

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Projected earnings on OPEB plan investments				
Beginning plan fiduciary net position	\$ 991,494	100%	7.50%	\$ 74,362
Employer contributions	41,482	50%	7.50%	1,556
Benefit payments	(149,002)	50%	7.50%	(5,588)
Administrative expense and other	(13,200)	50%	7.50%	(495)
Total projected earnings				<u>\$ 69,835</u>

	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Interest on the Total OPEB Liability (a) x (b) x (c)
Interest cost on total OPEB liability				
Beginning total OPEB liability	\$ 1,060,657	100%	7.50%	\$ 79,549
Service cost	32,965	100%	7.50%	2,472
Benefit payments	(149,002)	50%	7.50%	(5,588)
Total interest on the total OPEB liability				<u>\$ 76,433</u>



EXPERIENCE AMORTIZATION

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Year	Differences Between Expected and Actual Experience		Recognition Period (Years)	2016	2017	2018	2019	2020	2021	2022	2023	
2016	N/A	N/A		-	-	-	-	-	-	-	-	
2017	-	6.8		-	-	-	-	-	-	-	-	
Net Increase (decrease) in OPEB expense			\$	-	\$	-	\$	-	\$	-	\$	-

Deferred outflows of resources and deferred inflows of resources arising from differences between expected and actual experience

Year	Balances at December 31, 2017		Amounts Recognized in OPEB Expense through December 31, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
	Experience Losses (a)	Experience Gains (b)			
2016	N/A	-	-	-	-
2017	-	-	-	-	-
				\$	\$
				-	-



ASSUMPTION CHANGE AMORTIZATION

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Changes of Assumptions

Year	Changes of Assumptions	Recognition Period (Years)	2016	2017	2018	2019	2020	2021	2022	2023
2016	N/A	N/A	-	-	-	-	-	-	-	-
2017	-	6.8	-	-	-	-	-	-	-	-
Net Increase (decrease) in OPEB expense			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Deferred outflows of resources and deferred inflows of resources arising from changes of assumptions

Balances at December 31, 2017					
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense through December 31, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	N/A	-	-	-	-
2017	-	-	-	-	-
				\$ -	\$ -

INVESTMENT GAIN/LOSS AMORTIZATION

Increase (Decrease) in OPEB Expense Arising from the Recognition of Differences between Projected and Actual Earnings on OPEB Plan Investments

Year	Differences Between Projected and Actual Earnings on OPEB Plan Investments		Recognition Period (Years)	2016	2017	2018	2019	2020	2021	2022					
2016	N/A	5.0		-	-	-	-	-	-	-					
2017	(95,273)	5.0		-	(19,055)	(19,055)	(19,055)	(19,055)	(19,053)	-					
Net Increase (decrease) in OPEB expense				\$	-	\$	(19,055)	\$	(19,055)	\$	(19,055)	\$	(19,053)	\$	-

Deferred outflows of resources and deferred inflows of resources arising from differences between expected and actual experience

Balances at December 31, 2017					
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense through December 31, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	N/A	-	-	-	-
2017	-	(95,273)	(19,055)	-	(76,218)
				\$ -	\$ (76,218)



DEFERRED OUTFLOWS AND INFLOWS

Source	Balances at December 31, 2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ -
Changes of assumptions	-	-
Net difference between projected and actual earnings on investments	-	(76,218)
Total	-	(76,218)

Deferred outflows of resources and deferred inflows of resources will be recognized in OPEB expense as follows:

Year	
2018	(19,055)
2019	(19,055)
2020	(19,055)
2021	(19,055)
2022	(19,053)
Thereafter	-



Input Information



Arthur J. Gallagher & Co.

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ABC CITY – GASB No. 74 & No. 75**INPUT INFORMATION - Summary of Plan Participants**

The following table summarizes the counts by health insurance coverage, average age, average service, and average compensation of active benefits eligible employees as of the January 1, 2017 valuation date.

Active Participants		Total
By Health Insurance Coverage		
▪ Single		121
▪ Single + Dependent (SPD)		21
▪ Family		49
▪ Waived		<u>42</u>
▪ Total		233
Averages		
▪ Age of participant		44.6
▪ Service (City)		11.6
▪ Annual compensation		\$ 60,890

ABC CITY – GASB No. 74 & No. 75**INPUT INFORMATION - Summary of Plan Participants (Continued)**

The following table summarizes the counts by health insurance coverage and member type and average ages of inactive participants and their covered spouses as of the January 1, 2017 valuation date.

Inactive Participants	Total
By Health Insurance Coverage	
▪ Single	38
▪ Single + Dependent (SPD)	1
▪ Family	<u>11</u>
▪ Total	50
By Member Type	
▪ Retiree	48
▪ Disabled	0
▪ Spouse	11
▪ Surviving Spouse	<u>2</u>
▪ Total	61
Averages	
▪ Age of participant	62
▪ Age of covered spouse	60

ABC CITY – GASB No. 74 & No. 75

INPUT INFORMATION - Summary of Plan Participants (Continued)

The following tables provide the reconciliation of benefits eligible participants from January 1, 2015 to January 1, 2015 and age/service scatters of active participants as of January 1, 2017.

Participant Reconciliation				
	Actives with Coverage	Actives Waiving Coverage	Inactives with Coverage	Total
1/1/2015 Participants	236	46	61	343
Hired	-	-	-	0
Rehired	-	-	-	0
Terminated	(28)	(10)	-	(38)
Retired	(10)	-	10	0
Waived coverage	(8)	8	-	0
Ended coverage	-	-	(20)	(20)
Added coverage	2	(2)	1	1
Died	(1)	-	(2)	(3)
Data corrections	-	-	-	-
1/1/2017 Participants	191	42	50	283

Age/Service Scatters								
Age	Years of City Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
0-19	-	-	-	-	-	-	-	0
20-24	5	-	-	-	-	-	-	5
25-29	15	5	1	-	-	-	-	21
30-34	10	28	1	-	-	-	-	39
35-39	8	10	7	2	-	-	-	27
40-44	3	4	7	9	3	-	-	26
45-49	3	3	6	7	8	2	-	29
50-54	3	4	7	3	1	9	-	27
55-59	7	4	8	5	6	7	-	37
60-64	5	6	1	2	1	1	-	16
65+	-	-	2	1	1	1	1	6
Total	59	64	40	29	20	20	1	233

INPUT INFORMATION - Summary of Plan Provisions (Post-Retirement Medical Plan)

This summary of plan provisions has been prepared for valuation purposes only. It outlines the plan provisions necessary to perform the Actuarial Valuation.

Eligibility Requirements

- Employees (excluding the Park District employees) of the ABC City participating in the City's group health insurance plan (medical and prescription drugs), who retire under the ABC City Employees' Pension Plan, may continue to participate in the City's group health insurance plan after retirement.
 - ABC City Employees' Pension Plan retirement eligibility:
 - Employees hired before July 7, 2010
 - Age 60 with 5 Years of Service, or Rule of 85 with 5 Years of Service
 - Employees hired after July 6, 2010
 - Age 60 with 10 Years of Service, or Rule of 90 with age 55 minimum
- The plan was closed to new entrants effective January 1, 2014

Length of Coverage

- Retirees and spouses are eligible to continue coverage in the City's group health insurance plan until they attain age 65, provided the above eligibility requirements are met and applicable premiums are paid. Retirees or spouses that elect not to continue health coverage, at any time, are not eligible to re-enroll in the City's group health insurance plan.
- Retirees that initially obtained spouse coverage may drop spouse coverage and maintain coverage for themselves; retirees may not drop coverage for themselves and maintain spouse coverage (spouses are allowed to maintain coverage if the retiree has reached age 65 and enrolled in the MSP).
- Spouses may maintain coverage until age 65 if the retiree should die.

2017 Participant Contributions

Retirees and spouses covered in the City's group health insurance plan (SC 250) are required to contribute the following monthly group health insurance plan (SC 250) premiums effective January 1, 2017:

▪ Single	\$ 589.38
▪ Single + Dependent (SPD)	1,037.20
▪ Family	1,532.20

INPUT INFORMATION - Summary of Plan Provisions (Post-Retirement Medical Plan - Continued)

Benefits Summary – Effective January 1, 2017

SC 250 Plan	In-Network	Out-of-Network
Deductible		
▪ Retiree	\$250	\$500
▪ Retiree plus Dependent (SPD)	\$375	\$750
▪ Family	\$500	\$1,000
Out-of-Pocket Maximum		
▪ Retiree	\$1,250	\$2,500
▪ Retiree plus Dependent (SPD)	\$1,875	\$3,750
▪ Family	\$2,500	\$5,000
Lifetime Maximum	Unlimited	Unlimited
Wellness Services	100% after \$25 copay	No Coverage
Office Visits	90% after \$25 copay	80% after \$25 copay
Hospital Services – Inpatient	90%	80%
Hospital Services – Outpatient (Scheduled)	90%	80%
Prescription Drugs		
▪ Outpatient Coinsurance Maximum	\$1,000 per member	
▪ Formulary – Generic	100% after \$10 copay	
▪ Formulary – Brand Name	80% after \$10 copay	
▪ Non-Formulary	50% after \$10 copay	



INPUT INFORMATION - Summary of Plan Provisions (Healthcare Supplement)

Eligibility Requirement

- Employees hired on or before July 6, 2010 who meet the retirement eligibility requirements for the ABC City Employees' Pension Plan, are eligible for the Healthcare Supplement. Employees hired after July 6, 2010 are not eligible for the Healthcare Supplement.
- ABC City Employees' Pension Plan retirement eligibility for employees hired before July 7, 2010
 - Age 60 with 5 Years of Service, or Rule of 85 with 5 Years of Service

Benefit Amount

- Employees of the City who retire under the ABC City Employees' Pension Plan before January 1, 2004 and annually provide proof of health insurance coverage receive a monthly healthcare supplement equal to the City's portion of the group-blended premium for an active employee with single coverage. Currently, the City contributes 90% of the group blended premium for an active employee with single coverage (i.e. \$530.44 per month).
- Employees who retire under the ABC City Employees' Pension Plan after December 31, 2003 receive a monthly healthcare supplement equal to \$7.50 per year of service.

Length of Coverage

Retirees are eligible to receive the healthcare supplement until they attain age 65, provided the above eligibility requirements are met.

GASB Statement Nos. 25 and 27

These healthcare supplement benefits are not accounted for in this valuation (i.e., valued under GASB Statements No. 43 and 45), rather they are accounted for in the pension plan valuation (i.e., valued under GASB Statements No. 25 and 27). The healthcare supplement benefits are not valued under GASB Statements No. 43 and 45 because they are not effectively restricted to the payment of health insurance. Since they are not effectively restricted to the payment of health insurance, they are considered retirement income and are valued under GASB Statements No. 25 and 27.



INPUT INFORMATION - Actuarial Assumptions and Methods

The actuarial assumptions used in this Actuarial Valuation were based on actual City experience and developed through discussions with the City, or were drawn from the 2006-2011 ABC City Employees' Pension Plan Experience Study.

Valuation Date

January 1, 2017

Measurement Date

December 31, 2017

Benefits Valued

Pre-65 medical and prescription drug coverage are valued.

Post-65 medical and prescription drug coverage is not valued because retirees participating in the City sponsored Medicare Supplemental Plan are required to contribute the full Medicare Supplemental Plan premium which is assumed to cover their full cost of coverage.

Dental coverage is not valued because retirees are required to contribute the full COBRA dental rate which is assumed to cover their full cost of coverage.

Discount Rate

7.50% (plan assets and future contributions are sufficient to make all future benefit payments)

Investment Rate of Return

7.50%

Salary Increase Rates

Salaries are assumed to increase according to the following table:

Years of Service	Rates
0 - 4	0.070
5 - 12	0.045
13 +	0.040

Marriage Rates

85% of employees are assumed to be married.

Spouse Age Differential

Males are assumed to be 3 years older than female spouses; females are assumed to be 3 years younger than male spouses.

INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)**Health Insurance Elections**

80% of City employees are assumed to elect medical coverage at retirement.

60% of married City employees electing medical coverage at retirement are assumed to elect medical coverage for their spouse.

Current retirees are assumed to continue with their current medical coverage (i.e., Retiree, Retiree + Dependent, or Family).

Withdrawal Rates

Based on City experience.

Non-Police			Police		
Age	Male Rates	Female Rates	Age	Male Rates	Female Rates
< 35	0.12	0.08	< 35	0.14	0.14
35 – 39	0.03	0.04	35 – 39	0.04	0.10
40 - 44	0.03	0.04	40 - 44	0.04	0.10
45 – 49	0.03	0.02	45 – 49	0.04	0.10
50 - 54	0.03	0.02	50 - 54	0.00	0.00
55 +	0.01	0.01	55 +	0.00	0.00

Retirement Rates

Active Members are assumed to retire according to the following table:

If hired before 7/6/2010		If hired after 7/5/2010	
Years after Rule of 85	Rates	Years after Rule of 90 and Age 55	Rates
0 - 1	0.50	0 - 1	0.50
1 - 2	0.15	1 - 2	0.15
2 - 3	0.10	2 - 3	0.10

Members not retiring upon attaining the above criteria are assumed to retire according to the following rates:

Non-Police		Police	
Age	Rates	Age	Rates
60 - 65	0.20	60 – 61	0.67
66	0.40	62+	1.00
67	0.60		
68	0.80		
69+	1.00		

INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)

Disability Rates

None assumed

Mortality Rates**Non-Disabled Participants:** RP-2000 Table with projected future improvements using scale AA**Disabled Participants:** Rates as shown in the following table:

Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.02054	0.01709	50	0.04537	0.03363	80	0.13360	0.08472
21	0.02030	0.01744	51	0.04769	0.03440	81	0.13854	0.09001
22	0.01994	0.01784	52	0.04998	0.03504	82	0.14394	0.09571
23	0.01940	0.01815	53	0.05229	0.03568	83	0.14988	0.10179
24	0.01875	0.01839	54	0.05460	0.03635	84	0.15615	0.10818
25	0.01813	0.01853	55	0.05690	0.03701	85	0.16253	0.11480
26	0.01761	0.01859	56	0.05915	0.03763	86	0.16884	0.12159
27	0.01734	0.01872	57	0.06122	0.03826	87	0.17496	0.12848
28	0.01733	0.01904	58	0.06339	0.03887	88	0.18091	0.13542
29	0.01754	0.01942	59	0.06601	0.03986	89	0.18668	0.14240
30	0.01794	0.01984	60	0.06922	0.04122	90	0.19232	0.14938
31	0.01847	0.02029	61	0.07279	0.04272	91	0.20537	0.16289
32	0.01908	0.02071	62	0.07578	0.04380	92	0.21905	0.17721
33	0.01978	0.02107	63	0.07801	0.04436	93	0.23341	0.19234
34	0.02053	0.02141	64	0.07931	0.04430	94	0.24846	0.20828
35	0.02135	0.02169	65	0.08219	0.04527	95	0.26327	0.22418
36	0.02224	0.02195	66	0.08516	0.04641	96	0.27768	0.23980
37	0.02324	0.02226	67	0.08816	0.04768	97	0.29151	0.25495
38	0.02433	0.02269	68	0.09118	0.04907	98	0.30460	0.26937
39	0.02550	0.02326	69	0.09429	0.05068	99	0.31678	0.28284
40	0.02676	0.02398	70	0.09299	0.05063	100	0.32945	0.29698
41	0.02814	0.02482	71	0.09546	0.05223	101	0.34263	0.31183
42	0.02966	0.02577	72	0.09956	0.05469	102	0.35633	0.32742
43	0.03126	0.02678	73	0.10368	0.05737	103	0.37059	0.34379
44	0.03291	0.02780	74	0.10781	0.06026	104	0.38541	0.36098
45	0.03468	0.02886	75	0.11203	0.06349	105	0.40083	0.37903
46	0.03658	0.02990	76	0.11633	0.06711	106	0.41686	0.39799
47	0.03867	0.03092	77	0.12059	0.07102	107	0.43353	0.41788
48	0.04085	0.03189	78	0.12471	0.07525	108	0.45088	0.43878
49	0.04309	0.03279	79	0.12900	0.07981	109	0.46891	0.46072
						110	0.48767	0.48375
						111+	1.00000	1.00000

INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)**Per Capita Claims and Administrative Costs**

Medical and prescription drug per capita claims and administration costs were developed based on the following:

- SC 250 Plan claims experience (including prescription drugs), fees, and administration costs for the City's employees and retirees from January 1, 2014 through December 31, 2016.
- Claims experience was adjusted for healthcare cost trend, age-sex differentials between employees and retirees.

The 2017 per capita claims and administrative costs below are used in this January 1, 2017 valuation. The 2015 per capita claims and administrative costs below were used in the January 1, 2015 valuation and included for comparative purposes.

Per Capita Claims and Administrative Costs (PCCC)								
Age	2015 Valuation PCCC	2017 Valuation PCCC	Age	2015 Valuation PCCC	2017 Valuation PCCC	Age	2015 Valuation PCCC	2017 Valuation PCCC
40	\$ 3,654	\$ 4,220	50	\$ 5,564	\$ 6,422	60	\$ 8,049	\$ 9,288
41	3,811	4,401	51	5,803	6,697	61	8,300	9,578
42	3,975	4,590	52	6,052	6,984	62	8,559	9,877
43	4,146	4,787	53	6,312	7,284	63	8,826	10,185
44	4,324	4,992	54	6,546	7,553	64	9,099	10,500
45	4,510	5,206	55	6,788	7,832	65+	N/A	N/A
46	4,704	5,429	56	7,039	8,122			
47	4,906	5,662	57	7,299	8,422			
48	5,116	5,905	58	7,569	8,734			
49	5,335	6,158	59	7,805	9,007			



INPUT INFORMATION – Summary of Actuarial Assumptions and Methods (Continued)**Healthcare Cost Trend Rates**

Trend rates are used to project health insurance claims and administration costs and retiree premiums into the future. If healthcare inflation were to continue at its current rate, eventually 100% of the Gross National Product (GNP) would be allocated for healthcare services. Since this is unrealistic, healthcare cost trend rates are assumed to decrease in future years. The following table provides the healthcare cost trend rates for future years.

Fiscal Year Beginning	January 1, 2015 Valuation	January 1, 2017 Valuation
2015	8.50%	N/A
2016	8.00%	N/A
2017	7.50%	8.50%
2018	7.00%	8.00%
2019	6.50%	7.50%
2020	6.00%	7.00%
2021	5.50%	6.50%
2022	5.00%	6.00%
2023	5.00%	5.50%
2024+	5.00%	5.00%

Cadillac Tax Impact

We estimate that the 40% excise tax will be payable beginning in the year 2037.

Actuarial Cost Methods

Entry Age Normal level percent of pay. Investment gains/losses are amortized over 5 years, liability gains/losses are amortized over Average Working Lifetime, and Plan changes are recognized immediately.

Actuarial Value of Assets

Market value

**Governmental Accounting Standards
No. 74 & No. 75 Definitions**



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GOVERNMENTAL ACCOUNTING STANDARDS NO. 74 & NO. 75 DEFINITIONS

Actuarially Determined Contribution (ADC)

A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial Present Value of Benefits (PVB)

Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

Average Working Lifetime

Headcount weighted average expected future service, including inactive participants (0 years).

Group Premium Cost-Sharing

An amount the employer pays towards the Group Premium that is charged to a Retiree to participate in the employer-sponsored plan.

Implicit Rate Subsidy

The benefit a retiree receives equal to the difference between the medical and prescription drug expected claims costs for retirees and the Group Premium.

Net OPEB Liability (NOL)

The excess of the Total OPEB Liability over the Plan Fiduciary Net Position (unfunded Total OPEB Liability).

OPEB Expense

The amount the employer charges as the cost of the postemployment healthcare benefits on its income statement each fiscal year.

Plan Fiduciary Net Position

The value of assets irrevocably dedicated to the plan for providing future benefits to participants after employment.

Service Cost

The portion of the Actuarial Present Value of Benefits expected to be earned during the year, and allocated to the year, pursuant to the actuarial assumptions and methods used.

Total OPEB Liability (TOL)

As of a particular date, the Total OPEB Liability is the portion of the Actuarial Present Value of Benefits attributed to an employee's past service.



Gallagher

Insurance | Risk Management | Consulting

October 20, 2017

Mr. John Doe
Director of Human Resources
ABC City
123 Main Street
ABC, MN 55555

Re: Experience Study for the ABC City Employees' Pension Plan and the Police Employees' Pension Plan

Dear John:

The purpose of this letter is to summarize the results of the experience study for the ABC City pension plans.

What is an Experience Study?

The experience study reviewed the past demographic and economic experience of each pension plan. The plans' actual experience during the experience study period was compared to results that were expected based on actuarial assumptions during that period. Demographic assumptions reviewed in the experience study included mortality, disability, termination, and retirement rates. The analysis also studied economic assumptions such as investment return, salary increases and total payroll growth.

The experience study was based on actual participant data from January 1, 2012 through December 31, 2016. Data for every person that was a participant during that period was considered for this study.

Summary of Results

An experience study will either support the continued use of the current actuarial assumptions or provide support for assumption changes. Accurate assumptions are important as they result in the most accurate and level contribution pattern. Inaccurate assumptions may lead to recurring gains or losses that would result in long-term trends of lower or higher contributions.

Past performance is helpful in establishing good assumptions. However, it should not be the sole reason for an assumption change. An assumption recommendation would balance the effect of actual past plan experience with expected future trends. Therefore, there remains a subjective element to appropriate setting of assumptions.

This experience study was used as a basis for justifying or recommending changes to the current assumptions used by the Plans. The impact on the recommended contribution due to recommended changes in the assumptions was also determined. It is important to note that the ultimate cost of the plan, in terms of actual benefits paid, does not change due to assumption changes. Rather, refining assumptions to better fit what is expected to happen changes how the plan is funded. The goal is to minimize gains and losses and smooth out the year-to-year contribution recommendations.

Summary of Report Contents

The report is presented in three sections. The first two sections summarize current demographic and economic assumptions and provide the results of our analysis of each assumption. The third section of the report shows detailed calculations showing the cost impact of each individual recommended change as well as the cost impact of making all changes. We show the cost impact on contribution rates, liabilities, and the funding ratio.

Conclusion

Our findings resulted in recommending changes to the termination, retirement and mortality assumptions for both Plans and to the disability assumption for the Police Employees' Pension Plan. We also recommend you consider a change to the salary and rate-of-return assumptions for both plans.

The individual and combined effect of the changes on the recommended employer contribution rate is shown in Section 3 of the report.

If you have any questions, please contact me at (952) 356-3558 or Ben Holle at (952) 356-0718.

Sincerely,



Jesse Millner, EA, FSA
Actuarial Consultant

SAMPLE

Overview

Experience Study Analysis

An experience study compares actual past plan experience versus expected results. The results are used to challenge and possibly change the assumptions used to determine liabilities and contribution requirements. Experience studies are common for public sector plans and are typically done in five-year intervals. This experience study analyzed data from the period January 1, 2012 through December 31, 2016. We also considered the results from the prior experience study which covered the period from January 1, 2005 through December 31, 2011. Actual plan experience was documented for each past and present participant in both plans during the entire five-year study period.

The key assumptions consist of *demographic assumptions* related to individual participant expectations for death, disability, termination, and retirement and *economic assumptions* regarding investment returns, salary increases, and total payroll growth. Current assumptions and a summary of the experience study analysis are provided below. All of the assumptions apply to both the Employees' Pension and the Police Employees' Pension Plans except where noted.

Section One – Demographic Assumptions**I. Demographic Assumptions****Actuarial Valuation Assumption****GBS Analysis*****Mortality Rates:***

Mortality rates are based on the 1994 Group Annuity Mortality (GAM) Table for Males and Females. Sample rates are shown below.

Male Rates (per 1,000)		Female Rates (per 1,000)	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
30	1	30	0
35	1	35	0
40	1	40	1
45	2	45	1
50	3	50	1
55	4	55	2
60	8	60	4
65	15	65	9
70	24	70	14
75	37	75	23
80	62	80	39
85	97	85	68
90	153	90	116
95	234	95	186
100	317	100	276

<u>Assumption</u>	<u>Expected Deaths</u>
1994 GAM - Current	46.9
RP-2014, MP-2014	37.3
RP-2014, MP-2015	38.6
RP-2014, MP-2016	39.8
ABC Company	40.7
Actual Deaths	35.0

The experience study indicated 1 active City employee died during the study period. There were no active Police employee deaths during the study period. This combined experience is significantly lower than the expected number of total deaths (8.0).

The study indicated 28 actual vs. 31.4 expected deaths among inactive City participants. There were 6 actual vs. 7.5 expected deaths among inactive Police participants. Overall the number of actual deaths (34) for inactive participants was lower than expected (38.9).

The 1994 GAM table was recommended as a result of prior studies, but mortality rates have generally improved since the time that table was developed. Prior studies noted that we expect mortality improvements to continue into the future, and the results above indicate that the 1994 GAM table may now be outdated.

The Society of Actuaries' (SOA) most recent mortality study resulted in the RP-2014 mortality table. Along with this base table they published a mortality improvement scale – MP-2014. Since then they have updated this improvement scale twice – MP-2015 and MP-2016. We have calculated the expected deaths over the study period using these assumptions and the table used by ABC Company. These can be compared to the 35 actual deaths to find a 'best fit'.

As shown in the bottom table of the left-hand column the RP-2014, MP-2014 assumption results in the best fit of the Plans' experience over the study period (37.3 expected deaths vs. 35 actual).

We recommend changing the assumption to RP-2014 Generational Mortality projected using mortality improvement scale MP-2014. This table most closely tracks recent experience of both plans, and will provide the plans with a conservative margin in the future since MP-2014 projects greater future improvements in mortality.

The low number of participants on disability retirement makes an analysis of a separate disability mortality table relatively insignificant. The use of the same table for post-disablement mortality seems reasonable.

EXPERIENCE STUDY FOR THE ABC CITY EMPLOYEES’ PENSION PLAN AND THE POLICE EMPLOYEES’ PENSION PLAN

I. Demographic Assumptions (continued)	
Actuarial Valuation Assumption	GBS Analysis
Disability Rates:	
None for the Employees’ Pension Plan Participants. Disability rates are based on the 1964 OASDI Experience Table for Police Employees’ Pension Plan Participants.	There were no occurrences of disability in the Employees’ Pension Plan. There were also no disabilities in the Police Employees’ Pension Plan compared to 2 expected. Based on the combined results of the prior two studies (0 disabilities compared to 4 expected), we recommend adjusting the current assumed rates downward by 50%.

EXPERIENCE STUDY FOR THE ABC CITY EMPLOYEES' PENSION PLAN AND THE POLICE EMPLOYEES' PENSION PLAN

I. Demographic Assumptions (continued)								
Actuarial Valuation Assumption			GBS Analysis					
Termination Rates:								
Active Participant termination rates are based on plan experience. Sample rates are shown below.			The experience study results indicate that the current termination assumption considerably understates the number of terminations each year for both Plans. There were 193 actual terminations vs. 109.1 expected for the City Plan and 55 actual terminations vs. 34.8 expected for the Police Plan.					
<u>Employees' Pension Plan</u>			Prior experience studies also indicated that actual terminations were significantly higher than expected. These studies also show that termination rates in the first few years of employment are significantly higher than later years. This can be addressed by modifying the assumption to use an age by service table rather than a table based only on age.					
<u>Ages</u>	<u>Male</u>	<u>Female</u>	Based on the experience study results, GBS recommends changing the assumption to the following:					
20-24	8%	20%	Employee's Pension Plan		Police Employee's Pension Plan			
25-29	8%	15%	<u>Service</u>	<u>Male</u>	<u>Female</u>	<u>Service</u>	<u>Male</u>	<u>Female</u>
30-34	8%	15%	0	18%	24%	0	20%	16%
35-39	8%	8%	1	15%	18%	1	15%	13%
40-44	3%	8%	2	12%	12%	2	12%	10%
45-49	2%	6%	<u>Ages</u>	<u>Male</u>	<u>Female</u>	<u>Ages</u>	<u>Male</u>	<u>Female</u>
50-54	1%	3%	20-24	8%	8%	20-24	10%	10%
55+	0%	0%	25-29	8%	8%	25-29	10%	10%
			30-34	8%	8%	30-34	6%	8%
			35-39	8%	8%	35-39	3%	8%
			40-44	2%	8%	40-44	3%	4%
			45-49	2%	6%	45-49	3%	4%
			50-54	1%	3%	50+	0%	0%
			55+	0%	0%			
<u>Police Employees' Pension Plan</u>								
<u>Ages</u>	<u>Male</u>	<u>Female</u>						
20-24	10%	10%						
25-29	10%	10%						
30-34	6%	8%						
35-39	3%	8%						
40-44	3%	4%						
45-49	3%	4%						
50+	0%	0%						

EXPERIENCE STUDY FOR THE ABC CITY EMPLOYEES' PENSION PLAN AND THE POLICE EMPLOYEES' PENSION PLAN

I. Demographic Assumptions (continued)							
Actuarial Valuation Assumption		GBS Analysis					
Retirement Rates:							
Active Participant termination rates are based on plan experience. Sample rates are shown below.		Prior to 2012, all participants were assumed to retire on their Normal Retirement Date. This assumption was changed at that time based on results of the 2012 study that indicated that participants were delaying retirement.					
<u>Employees' Pension Plan</u>		Our current study indicates that male participants are retiring at earlier ages than female participants. These findings are consistent with national and historical trends. Rather than assuming identical rates for male and female participants, we recommend updating these rates to more closely reflect the plans' experience as follows:					
<u>Ages</u>		<u>Employees' Pension Plan</u>			<u>Police Employees' Pension Plan</u>		
62-65	20%	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
66	40%	60	5%	0%	55	45%	5%
67	60%	61	15%	0%	56	30%	5%
68	80%	62	25%	20%	57-61	20%	5%
69+	100%	63-64	25%	10%	62	40%	25%
		65	50%	25%	63	60%	25%
		66	50%	25%	64	80%	50%
		67	50%	50%	65+	100%	100%
		68	100%	75%			
		69+	100%	100%			
<u>Police Employees' Pension Plan</u>							
<u>Ages</u>							
55-61	20%						
62	40%						
63	60%						
64	80%						
65+	100%						
Other Assumptions:							
Marriage: 85% of Participants are assumed to be married.		The experience study indicates that 75% of City participants and 86% of Police participants are married when they commence benefit payments.					
Spouse Age: Males are assumed to be 3 years older than female spouses.		Male participants average 1.7 years older than their spouse in the City plan and 3.4 years in the police plan. No change is recommended for either the Marriage or Spouse Age assumption.					

Section Two – Economic Assumptions

II. Economic Assumptions				
Actuarial Valuation Assumption	GBS Analysis			
Investment Return:				
The fund is assumed to earn 7.50% per year, net of expenses. Unlike demographic assumptions, less knowledge can be gained for setting economic assumptions from looking backwards over a relatively short period of time. In this section, we include actual rates of return in each Plan over the periods of the past three experience studies for comparison purposes. However, we believe the best source of information for setting the future assumption is based on (1) your investment allocation, and (2) your investment advisor’s expectations for future returns for each of those investment classes. During the period of the three experience studies, the 7.50% assumption has not been met in the aggregate, however, it was met over the most recent 5 year period from 2012-2016. The Geometric average shown is a better long term estimate because it incorporates the negative effect of volatility. This can be illustrated by considering a two year period with returns of 12.50% and 2.50%. The arithmetic average is 7.50% while the geometric average is only 7.38%. Based on the experience study results, we recommend <u>considering a decrease from the current assumption of 7.50%</u>. We recommend that you rely on your investment consultant for input in selecting the investment return assumption. This report can be provided to your investment consultant along with any other information they need to assist you with a recommendation.	Year	City	Police	
	1998	13.0%	11.4%	
	1999	12.2%	8.9%	
	2000	0.4%	-0.3%	
	2001	-1.6%	-2.2%	
	2002	-8.0%	-8.7%	
	2003	24.5%	24.5%	
	2004	7.8%	10.9%	
	2005	10.9%	10.7%	
	2006	14.3%	14.6%	
	2007	9.6%	9.7%	
	2008	-21.0%	-22.4%	
	2009	13.2%	13.5%	
	2010	11.3%	11.7%	
	2011	2.5%	1.9%	
	2012	13.2%	13.6%	
	2013	13.9%	15.1%	
	2014	6.4%	6.3%	
	2015	1.1%	0.9%	
	2016	7.1%	7.4%	
	Arithmetic	6.9%	6.7%	
	Geometric	6.4%	6.2%	

EXPERIENCE STUDY FOR THE ABC CITY EMPLOYEES' PENSION PLAN AND THE POLICE EMPLOYEES' PENSION PLAN

II. Economic Assumptions (continued)			
Actuarial Valuation Assumption		GBS Analysis	
Salary Increases:			
Active Participant salaries are assumed to increase based on service according to the following rates:		The results of the experience study show salary increases have been higher than assumed over the past 5 years. Actual experience is as follows:	
Years of Service	Rate	<u>Employees' Pension Plan</u>	<u>Police Employees' Pension Plan</u>
0 - 9	5%	<u>Service</u> <u>Rate</u>	<u>Service</u> <u>Rate</u>
10 +	4%	0-4 6.1%	0-4 5.1%
		5-9 6.4%	5-9 6.9%
		10-14 6.0%	10-14 6.4%
		15-19 5.7%	15-19 6.3%
		20-24 5.8%	20-24 7.6%
		25+ 5.0%	25+ 5.3%
		We recommend <u>considering</u> changes to the following rates:	
		<u>Employees' Pension Plan</u>	<u>Police Employees' Pension Plan</u>
		<u>Service</u> <u>Rate</u>	<u>Service</u> <u>Rate</u>
		0-4 6.00%	0-4 6.50%
		5-9 5.75%	5-9 6.25%
		10-14 5.50%	10-14 6.00%
		15-19 5.25%	15-19 5.75%
		20-24 5.00%	20-24 5.50%
		25+ 4.75%	25+ 5.25%
		We believe this assumption better matches the recent plan experience. However, we note that 2015 pay increases were fairly large while the other years were closer the current assumption. The assumption should also be based on anticipated future trends. If you do not expect another large across-the-board pay adjustment then it may be appropriate to assume smaller increases or keep the current assumption.	

II. Economic Assumptions (continued)	
Actuarial Valuation Assumption	GBS Analysis
Total Payroll Growth:	Total Payroll Growth:
The amortization of the Unfunded Liability is determined as a level percent of payroll using a 3.0% total payroll growth assumption.	<p>The payroll growth assumption is reasonable based on the individual rates of increase and workforce turnover. GASB does not allow anticipated workforce growth in the development of this assumption.</p> <p>We modeled future payroll growth based on our recommended mortality, termination, retirement, and salary increase rates as well as pay for recent new hires. The average annual growth rate over the remaining amortization period is 3.2% for both the City and Police Plans.</p> <p>We do not recommend an assumption change for total payroll growth.</p>

Section Three - Conclusion and Effects of Recommended Assumption Changes

Based on our analysis of the assumptions and methods stated above, GBS recommends the following changes. We have analyzed the impact they would have had if applied to the January 1, 2017 actuarial valuations:

- A change in termination rates for both Plans. The recommended rates result in a higher liability but a lower normal cost for each plan. This nets to a 0.1% of pay decrease in the contribution rate for the City plan and no change (after rounding) in the rate for the Police plan.
- A change in retirement rates for both plans to reflect male employees retiring earlier than female employees and to better reflect actual experience at each age. This results in an increase in liability. The increase in contribution rate from this assumption change is 0.3% of pay for the Employees' Pension Plan and 0.4% for the Police Employees' Pension Plan.
- A change in the disability rates for the Police Employees' Pension Plan. The recommended rates result in a lower liability but a higher normal cost. This nets to a 0.1% of pay increase in the contribution rate.
- A change in mortality rates for both plans. This results in an increase in liability. The increase in contribution rate from this assumption change is 3.3% of pay for the Employees' Pension Plan and 3.4% for the Police Employees' Pension Plan.
- A potential change in salary increase rates for both plans. We modeled an assumption (shown above) that better reflects experience over the study period. This results in an increase in liability. The increase in contribution rate from this assumption change is 2.0% of pay for the Employees' Pension Plan and 3.2% for the Police Employees' Pension Plan.

For economic assumptions especially, you should consider future expectations. It might be that you don't expect pay to increase as much in the future as it did over the study period. If that is the case it might not be appropriate to change this assumption.

- A potential change in the rate-of-return assumption for both plans. We modeled a change to 6.50% which reflects experience over the study period and a general trend nationally among public plans. This results in a significant increase in liability. The increase in contribution rate from this assumption change is 5.4% of pay for the Employees' Pension Plan and 7.9% for the Police Employees' Pension Plan.

Similar to the salary assumption, you should consider future expectations. We modeled 6.50% to give you an idea of the impact of a 1.00% change but recommend consulting with your investment advisor to either justify the current assumption or determine an appropriate change. The selected assumption should be in line with their expectations of future returns and the investment allocation should be appropriate to meet the expectation.

A complete analysis of the impact on the recommended contribution for each plan is in the next section of the report.

EXPERIENCE STUDY FOR THE ABC CITY EMPLOYEES' PENSION PLAN AND THE POLICE EMPLOYEES' PENSION PLAN

ABC City Employees' Pension Plan

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EXPERIENCE STUDY FOR THE ABC CITY EMPLOYEES' PENSION PLAN AND THE POLICE EMPLOYEES' PENSION PLAN

ABC City Police Employees' Pension Plan

	<i>Current Plan as of January 1, 2017</i>	<i>Disability Rates</i>	<i>Termination Rates</i>	<i>Retirement Rates</i>	<i>Salary Scale</i>	<i>Mortality Rates</i>	<i>6.50% Investment Return</i>	<i>All Changes 7.50% ROR</i>	<i>All Changes 6.50% ROR</i>
<i>Investment Return</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>7.50%</i>	<i>6.50%</i>	<i>7.50%</i>	<i>6.50%</i>
<u>Development of Unfunded Actuarial Accrued Liability</u>									
1. Actuarial Accrued Liability									
(a) Participants Receiving Benefits	\$ 25,738,165	\$ 25,738,165	\$ 25,738,165	\$ 25,738,165	\$ 25,738,165	\$ 27,276,500	\$ 27,981,786	\$ 27,276,499	\$ 29,861,872
(b) Terminated Vested Participants	2,108,757	2,108,757	2,108,757	2,108,757	2,108,757	2,205,687	2,517,848	2,205,687	2,655,848
(c) Active Participants	16,612,968	16,590,272	16,691,380	16,736,665	17,734,783	17,660,681	19,582,916	19,047,414	22,597,303
(d) Total (a)+(b)+(c)	\$ 44,459,890	\$ 44,437,194	\$ 44,538,302	\$ 44,583,587	\$ 45,581,705	\$ 47,142,868	\$ 50,082,550	\$ 48,529,600	\$ 55,115,023
Change (\$)		\$ (22,696)	\$ 78,412	\$ 123,697	\$ 1,121,815	\$ 2,682,978	\$ 5,622,660	\$ 4,069,710	\$ 10,655,133
Change (%)		-0.1%	0.2%	0.3%	2.5%	6.0%	12.6%	9.2%	24.0%
	35,395,974	35,395,974	35,395,974	35,395,974	35,395,974	35,395,974	35,395,974	35,395,974	35,395,974
3. Unfunded Actuarial Accrued Liability (1)(d)-(2)	\$ 9,063,916	\$ 9,041,220	\$ 9,142,328	\$ 9,187,613	\$ 10,185,731	\$ 11,746,894	\$ 14,686,576	\$ 13,133,626	\$ 19,719,049
<u>Annual Required Contribution (Dollar Amounts)</u>									
1. Total Normal Cost	\$ 964,707	\$ 967,841	\$ 954,241	\$ 978,873	\$ 1,153,510	\$ 1,027,257	\$ 1,245,282	\$ 1,231,789	\$ 1,589,855
2. Expected Expenses	127,744	127,744	127,744	127,744	127,744	127,744	127,744	127,744	127,744
3. Expected employee contribution	(718,489)	(718,489)	(718,489)	(718,489)	(729,155)	(718,489)	(718,489)	(729,155)	(729,155)
4. City Normal Cost (1)+(2)+(3)	\$ 373,962	\$ 377,096	\$ 363,496	\$ 388,128	\$ 552,099	\$ 436,512	\$ 654,537	\$ 630,378	\$ 988,444
5. Amortization of Unfunded Actuarial Accrued Liability	622,337	620,779	627,721	630,830	699,362	806,553	927,176	901,767	1,244,880
6. Total Annual Required Contribution (4)+(5)	\$ 996,299	\$ 997,875	\$ 991,217	\$ 1,018,958	\$ 1,251,461	\$ 1,243,065	\$ 1,581,713	\$ 1,532,145	\$ 2,233,324
7. Interest to mid-year at 7.5%	37,361	37,420	37,171	38,211	46,930	46,615	51,406	57,455	72,583
8. Recommended contribution, mid-year (6)+(7)	\$ 1,033,660	\$ 1,035,295	\$ 1,028,388	\$ 1,057,169	\$ 1,298,391	\$ 1,289,680	\$ 1,633,119	\$ 1,589,600	\$ 2,305,907
<u>Annual Required Contribution (As a Percent of Payroll)</u>									
1. Total Normal Cost	12.6%	12.7%	12.5%	12.8%	14.9%	13.4%	16.3%	15.9%	20.5%
2. Expected Administrative Expenses	1.7%	1.7%	1.7%	1.7%	1.6%	1.7%	1.7%	1.6%	1.6%
3. Expected employee contribution	-9.4%	-9.4%	-9.4%	-9.4%	-9.4%	-9.4%	-9.4%	-9.4%	-9.4%
4. City Normal Cost (1)+(2)+(3)	4.9%	5.0%	4.8%	5.1%	7.1%	5.7%	8.6%	8.1%	12.7%
5. Amortization of Unfunded Actuarial Accrued Liability	8.1%	8.1%	8.2%	8.3%	9.0%	10.6%	12.1%	11.6%	16.0%
6. Total Annual Required Contribution (4)+(5)	13.0%	13.1%	13.0%	13.4%	16.1%	16.3%	20.7%	19.7%	28.7%
7. Interest to mid-year at 7.5%	0.5%	0.5%	0.5%	0.5%	0.6%	0.6%	0.7%	0.7%	0.9%
8. Recommended contribution, mid-year (6)+(7)	13.5%	13.6%	13.5%	13.9%	16.7%	16.9%	21.4%	20.4%	29.6%
Total Payroll	\$ 7,643,499	\$ 7,643,499	\$ 7,643,499	\$ 7,643,499	\$ 7,756,971	\$ 7,643,499	\$ 7,643,499	\$ 7,756,971	\$ 7,756,971
<u>Funding Ratio</u>									
1. Accumulated Benefit Liability	\$ 38,333,289	\$ 38,251,689	\$ 38,339,108	\$ 38,519,988	\$ 38,333,317	\$ 40,551,737	\$ 42,924,865	\$ 40,670,274	\$ 45,882,322
2. Funding Ratio	92.3%	92.5%	92.3%	91.9%	92.3%	87.3%	82.5%	87.0%	77.1%
3. One-time contribution to reach 100% Funding Ratio	\$ 2,937,315	\$ 2,855,715	\$ 2,943,134	\$ 3,124,014	\$ 2,937,343	\$ 5,155,763	\$ 7,528,891	\$ 5,274,300	\$ 10,486,348