BOARD OF COMMISSIONERS

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Mount Clemens, Michigan 48043
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BOARD OF COMMISSIONERS

REGULAR SESSION WITH A SPECIAL AGENDA

TUESDAY, SEPTEMBER 30, 2014

<u>FINAL SPECIAL AGENDA</u>

1. Call to Order

2. Pledge of Allegiance

3. Roll Call

4. Adoption of Agenda

5. Public Participation (five minutes maximum per speaker, or longer at the discretion of the Chairperson related only to issues contained on the agenda)

6. Presentation on Great Lakes Water Authority – Focus on Finance **(page 1)** **(attached)**

7. Presentation of Resolution to Authorize Financial Plan and Resolution to Approve Interim Trust **(informational purposes only-no votes will be taken)** **(page 31)** **(attached)**

8. New Business

9. Public Participation (five minutes maximum per speaker or longer at the discretion of the Chairperson)

10. Roll Call

11. Adjournment

Great Lakes Water Authority: Finance Sept. 30, 2014

Overview

The Great Lakes Water Authority calls for a $50 million lease payment from members; $17.5 million cost of the City of Detroit and a $32.5 million cost for the Tri-County region ratepayers.

The Fiscal Year of the GLWA begins on July 1 and ends on June 30

The GLWA has no taxing authority;

The GLWA has the authority to bond;

No obligations for Macomb County General Fund to fund the City of Detroit's water and sewer system;

All lease payments must fix the DWSD infrastructure;

Lease payments will support bond issue(s) to speed up the DWSD repair and rebuilding;

Leased assets and terms

The leased assets will include:

- Approximately 400 miles of regional water mains outside of Detroit;
- Approximately 360 miles of regional sewer pipe outside of Detroit;
- 5 water filtration systems (Lake Huron Water Treatment Plant, Northeast Water Treatment Plant, Southwest Water Treatment Plant, Springwells Water Treatment Plant, Water Works Park);
- The Jefferson Avenue Sewage Treatment Plant;
- A number of retention basins and pump stations

City of Detroit will retain ownership of these assets

All lease payments must stay within the water and sewer system to fix the infrastructure;

Meeting Schedule

Questions

Regional assets

- **Regional assets will include all infrastructure, equipment, facilities, land and other such fixed assets other than those retained as local assets by the City of Detroit;**
- **A regional $4.5 million annual Water Residential Assistance Fund is created;**
  - Supports residential water customers across the region that are financially unable to afford water services;
  - Those receiving financial support must agree to take appropriate actions to reduce water consumption;
  - $4.5 mil dedicated for 2014-15 and 0.5% of budgeted operating revenue per year thereafter (Estimates: 2015: $4.5 million; 2016: $4.7 million; 2017: $4.9 million);
  - Funded from common-to-all cash flow.
- **The GLWA may have additional financial obligations based on the final version of the Detroit Bankruptcy Plan of Adjustment;**
- **Lease terms will not be agreed upon if the $50 million lease payment would cause the entire Regional and Detroit local water and sewer system to be:**
  - Unable to provide a reasonable level of service
  - Unable to satisfy its debt obligations
  - Unable to adhere to the commitments set forth in the Plan of Adjustment

Sept. 30, 20

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Prezi

14

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What can DWSD use the $50 million for?

City of Detroit must use the $50 million annual lease payment ($17.5 million cost for Detroit ratepayers and $32.5 million cost for Tri-County region ratepayers) for the following:

- City of Detroit's water and sewer (local) infrastructure improvements;
- Debt service associated with Detroit's local infrastructure improvements;
- City of Detroit's share of the cost to GLWA's capital improvements, which are common-to-all assets

Common-to-all assets: Examples include the five water filtration plants, the sewage treatment plant and regional water pipes.

Detroit becomes a wholesale customer; the GLWA oversees suburban (Tri-County region) wholesale operations; common-to-all assets and Detroit wholesale operations.

Meeting Schedule

- [illegible] Government Operations [illegible] Meeting - [illegible]esentation on GLWA: Focus [illegible] Operations & Maintenance;

Regional assets

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  - Unable to satisfy its debt obligations
  - Unable to adhere to the commitments set forth in the Plan of Adjustment

Questions

- How does the 4%, 10 year cap work?

- Do individual municipalities who contract with the GLWA have to contribute to the $50 million annual lease payment and to the Water Residential Assistance (indigent) fund above and beyond their current rate/contract?

- Are there any plans to resolve the unfunded liability retiree health care for current/future DWSD employees? unfunded pensions for current/future DWSD employees?

- What is the financial liability for the Macomb County General Fund if the County wants to be removed from the GLWA? The local communities?

More questions

- What is the estimated amount of savings gained from refinancing bonds by GLWA?
- What is the estimated "Cash Flow to Debt Ratio" and "Debt Service Coverage Ratio" for the GLWA?
- Will GLWA bonds be backed by the full faith and credit of the State of Michigan?
- Need more information on the cost, implications, and considerations of Macomb County building its own water and sewer system?

Prezi

More questions

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-
- Need more information on the cost, implications, and considerations of Macomb County building its own water and sewer system?

Meeting Schedule

- 10/6/14 (Monday) 12 p.m. Government Operations Committee Meeting - Presentation on GLWA: Focus on Operations & Maintenance;

- 10/9/14 (Thursday) 9 a.m. Full Board Meeting / Public Hearing - Final Debate; Vote on GLWA MOU and/or AOI.

Eric Rothstein, CPA

Principal – Galardi Rothstein Group, LLC

Eric has more than 25 years of experience in water, wastewater, and stormwater utility finance, rate-making and regionalization; asset management, financial capability assessments; and use of structured decision processes for financial and institutional issues.

Eric's recent projects include:

- For Jefferson County, AL, Eric served as the County's rate consultant and municipal advisor for litigation related to the County's bankruptcy, subsequent negotiation of a Plan of Adjustment, and eventual exit from the the second largest municipal bankruptcy filing in U.S. history involving issuance of $1.7 billion in sewer warrants.
- For the City of Atlanta's Department of Watershed Management, Eric has been leading strategic financial planning for the multi-billion Clean Water Atlanta initiative since 2003.
- For several permittees (Atlanta, Akron, EBMUD, Honolulu, Guam, NEORSD, ST. Louis), Eric provided strategic and financial consulting services on the US EPA guidance to Financial Capability Assessments and low-income affordability issues.
- For the Halifax Regional Water Commission, Eric helped develop a Cost of Service and Rate Design Submission to establish rate-making practices for Canada's first regulated water, wastewater and stormwater utility.
- For the Egyptian Water Regulatory Agency through a USAID contract, Eric is conducting a customer classification and tariff design study to establish new ratemaking practices for Egypt's national water and wastewater utility holding company and associated subsidiaries.
- For the Green Bay Metropolitan Sewerage District, Eric facilitated the development of the District's 2009 Strategic Plan and developed a strategic financial planning that has been used to develop 10-year system-wide rate forecasts that incorporate required financing of the District's pending biosollids management project implementation.

Previously, Eric has served as Project Manager or Task Leader for a broad array of engagements ranging from development of a Regional Water Distribution Plan for the City of Houston to strategic financial planning and rate studies for Cleveland, DeKalb County (GA), East Bay MUD (Oakland), Honolulu, HI, New Orleans, LA, Rockford, IL, San Antonio River Authority, Salem OR, Tucson, AZ, and Winnipeg,MB to expert witness testimony for Illinois Attorney General, Jefferson County (AL), and Milwaukee Wholesale Customers.

Eric has also served as Principal Investigator or Task Leader for several AwwaRF research projects including the Development of Strategic Planning Process and Balanced Evaluation of Public – Private Partnership Options, Capital Strategy Manual, Asset Management Planning and Reporting Options (AMPRO), A Balanced Approach To Water Conservation: Removing Barriers And Maximizing Benefits and, for NACWA developed a White Paper on Wet Weather Financial Capability and Affordability.

From 1984-1994, Eric served as Financial Manager for the City of Austin, TX Water and Wastewater Utility and Resource ManagementDepartments.

Eric chaired the *WEF Financing and Charges for Wastewater Systems Manual of Practice* Task Force and *AWWA Water Rate Structures and Pricing Manual of Practice* Task Force and continues to serve on the national AWWA Competitive Practices and Rates & Charges Committees and the WEF and NACWA Utility Management Committees.

Education

MA, Economics, University of California-Davis;
AB, Economics & History, Ripon College, Ripon WI

Great Lakes Water Authority
Memorandum of Understanding
Financial Issues Overview

Macomb County Commission
Finance Executive Committee Meeting
October 1, 2014

DWSD Mediation Process

- Initial Authority discussions failed
  - Based on “monetizing” DWSD assets / revenues to benefit of City of Detroit General Fund creditors
- April 2014 Judge Cox resumes DWSD mediation
- Agreement that lease payment will “stay in the system” for City of Detroit local system or Detroit share of common costs
- Finance Working Group determination of feasibility of $50 million “control premium” in form of lease payment
- Memorandum of Understanding / Articles of Incorporation drafted for execution by Principals of counties and City of Detroit
  - **Pending affirmation by respective local government governing boards**
  - Multi-track implementation planning process pending

Memorandum of Understanding Outline

- Governance
- Lease
- Key Financial Terms
- O&M of Detroit and Other Local Systems
- Capital Improvements
- Treatment of Existing Contracts
- Evaluation and Transitional/Transactional Costs
- Management of the System for Benefit of Customers
- Termination of Authority or Withdrawal from Membership
- Conditions Precedent to Transfer
- Statement Regarding State Commitments

GLWA Governance

1 Voting Board Member	**1** Voting Board Member	**2** Voting Board Members	**1** Voting Board Member	**1** Voting* Board Member

- **Board appointed to 4-year terms serving "at will"**
  - Minimum education and experience requirements; compensation determined by Board
- **Supermajority (5/6) voting requirements for:**
  - Appointment of General Manager
  - Approval of rates and rate-setting protocols
  - Issuance of debt
  - Annual approval of 5-Year CIP
  - Adoption of a procurement policy
  - Approval of a lease of the Systems
  - Removal of any Board member for cause.

Key Financial Terms

- GLWA has no taxing power
- Incorporating municipalities / GLWA finances separate
- MFA available to Authority
- “Common to All” rate structure includes:
  - Lease payment ($50M) which is reinvested in system
  - $4.5M ratepayer assistance for all retail users in GLWA system
  - “Frozen” $26M recognitions of City ownership
- Open, transparent financial reporting
  - Pension liabilities limited per Bankruptcy, monitored
- Assumes annual revenue requirement increases of no more than 4% for each system

GLWA Lease of DWSD Assets

- **$50 million per year payments a "common to all" revenue requirement**
- **Held in separate Authority fund used at City's discretion for:**
  - Detroit local infrastructure improvements
  - Detroit share of common to all debt service or debt service for Detroit local improvement

Feasibility evaluation by DWSD Mediation Finance Working Group

GLWA Financial Forecasts

- Set aside Conway Mackenzie forecasts used for initial Plan of Adjustment
  - Approx. $100m/year for Detroit creditors
- Based on DWSD financial projections in July/Aug 2014
  - Used with limited modifications for Series 2014 water and sewer bond issues and tender
  - Incorporate conservative estimates from ongoing DWSD optimization program
  - Contemplated approximately $1.25 billion in capital spending (2015-2019)
    - $688 M Water / $553 M Sewer
  - **Assumes annual revenue requirement increases of no more than 4% for each system**

Estimated benefits / savings of GLWA creation

POA Pension/OPEB restructure financing	$20 - 25M / year cash flow reduction
Restricted asset earnings	$2.5 - 5M / year revenue increase
Outstanding debt refinancing	$15 -20M / year debt service reduction
Prospective capital financing	$2.5 - 5M / year debt service reduction
Enhanced DWSD Optimization*	$10 - 20M / year O&M expense reduction
	$50 - 75M / year in benefits / savings

* Includes potential reductions in energy/utility costs, contracted services and variable costs of non-revenue water; **excludes capital cost savings**

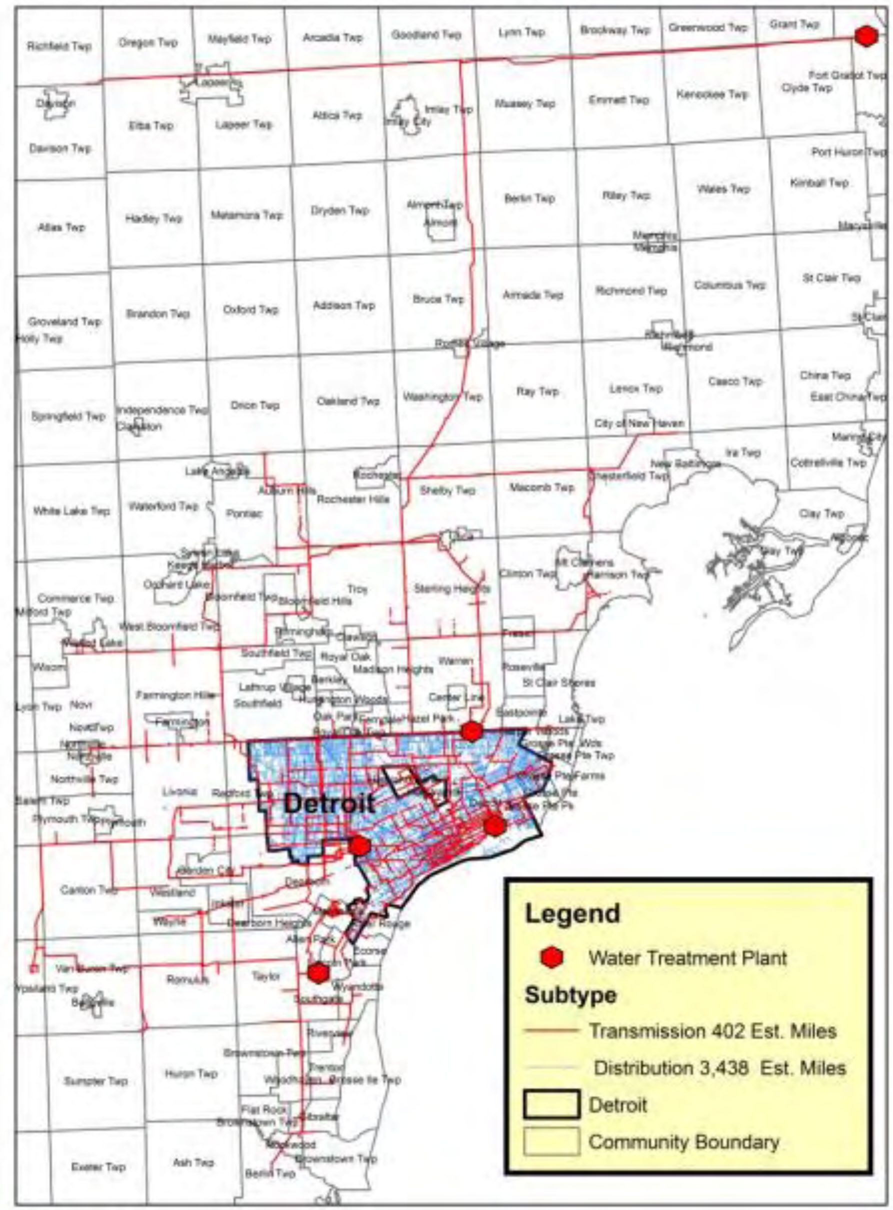
Major DWSD leased assets

- **Water system**
  - Treatment plants
  - Major pump stations & transmission lines
  - Buildings, service yards, equipment
- **Sewer system**
  - Jefferson Ave treatment plant
  - CSO facilities
  - Major lift stations & interceptors
  - Buildings, service yards, equipment

Water System

- "Common to All" components (in red) to be operated, maintained and improved by GLWA
- Retail system components (in blue)
  - City of Detroit retains rights to operate and maintain or contract at its discretion

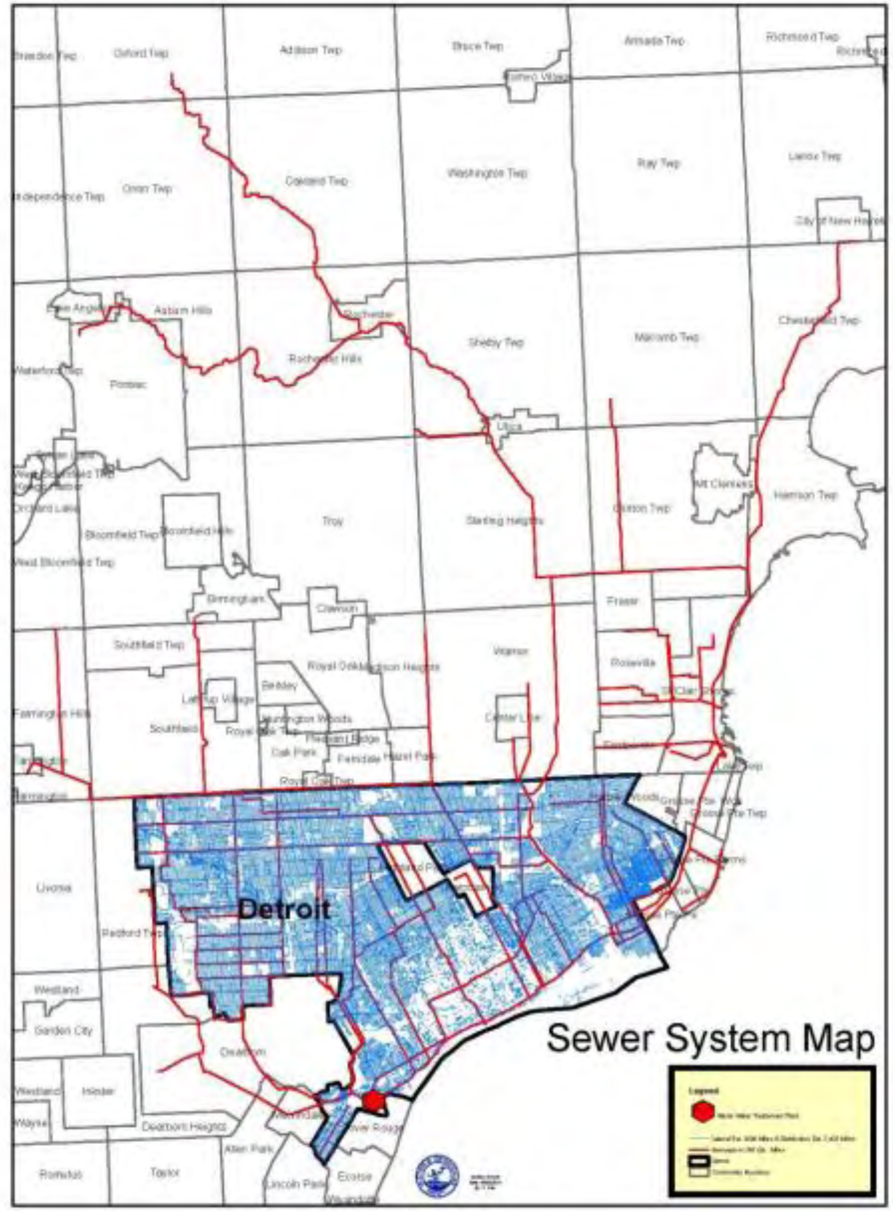
Water Map



DWSD-IT-GIS
Date: 9/06/2014
By: V. Farr

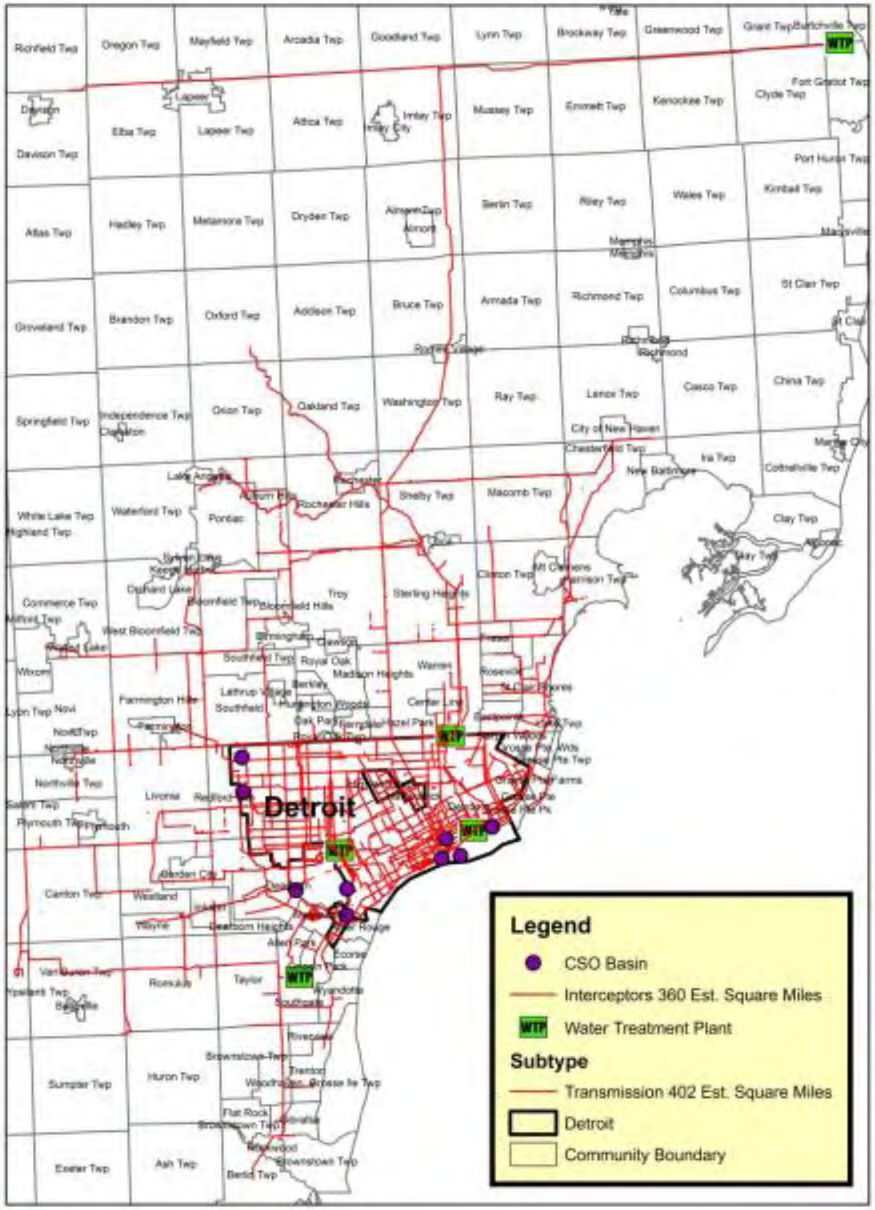
Sewer System

- "Common to All" components (in red) to be operated, maintained and improved by GLWA
- Retail system components (in blue)
  - City of Detroit retains rights to operate and maintain or contract at its discretion



Water and Sewer System

Sewer & Water System Map



DWSD-IT-GIS
Date: 9/05/2014
By: V. Farr

Feasible lease payment in perspective

- Lease payment a "common to all" expense
  - Approx. $30M from suburban communities
- Water loss /I&I reductions also benefit suburban communities

	Population Served/ Customers	Gross Operating Revenue	Annual PILOT and/or Dividend	% of Revenue	Priority of Payment Relative to Debt Service
Louisville Board of Water Works	850,000	$148,193,236	$32,609,198 [1]	22.00 %	After
Kansas City Board of Public Utilities* , KS	153,000	271,763,043	41,979,261 [2]	15.45	After
Orlando Utilities Commission*	2,000,000	854,383,000	102,584,000 [3]	12.01	Both
City of Sacramento Dep of Utilities (Water Fund)	450,000	86,780,000	9,279,000	10.69	Before
Citizens Energy Group of Indianapolis (Wastewater)	1,000,000	156,500,000	12,800,000	8.18	After
New York City Municipal Water	9,000,000	3,068,306,000	196,410,000	6.40	After
District of Columbia Water & Sewer	1,300,000	426,160,000	21,982,000 [4]	5.16	After
Lansing Board of Water and Light*	95,000	320,054,556	12,169,097	3.80	After
Atlanta Water & Wastewater	1,200,000	591,730,000	18,697,000	3.16	After
San Antonio Water System	460,000	417,869,000	10,926,000	2.61	After
Detroit Water and Sewerage Department	3,800,000	796,400,000	[50,000,000]	6.28	

Source: Annual Reports and Audited Finanical Statements

** Includes electric service*

[1] Includes $14mm of free water and fire protection

[2] Includes $13.7mm of free services, including street lighting, fire hydrants, traffic signals, etc.

[3] Includes $55.4 million of payments to governments and taxes (before debt service) and a $47.2 million dividend (after debt service)

[4] Includes Right of Way fees of $5.1mm

Other Key Financial Terms

- Water Residential Assistance Program (WRAP)
  - Available to residential customers throughout entirety of GLWA service area
- Financing support of Michigan Finance Authority
- Priority consideration of state grant for start-up costs
- Mandate for regional system optimization
- Preserves $26M recognition of ownership
- Preserves annual revenue requirement increases of no more than 4% for each system

Existing Contracts / Capital Improvements

Existing Contracts

- The City will assign all customer (wholesale) contracts to GLWA
- GLWA a successor employer to DWSD. Collective Bargaining Agreements (CBAs) assured
- Existing DWSD vendor contracts assigned to GLWA

Capital Improvements

- State agreement to facilitate access to State administered financing
- City of Detroit determines priorities for dispensing local system improvement funds

Considering the Great Lakes Water Authority (GLWA): Preliminary Evaluation of Water Supply and Wastewater Treatment Alternatives for Macomb County Communities

Recent preliminary studies administered by the Office of the Macomb County Public Works Commissioner have explored the general feasibility of several alternatives to provide independent water supply and wastewater (sewerage) systems dedicated to meet the needs of Macomb County communities. These studies evaluated a range of previously developed and new potential water supply and wastewater conveyance/treatment options and generated planning-level capital cost estimates for each option.

It should be noted that these studies did not recommend specific courses of action, but rather provided a summary of alternatives to consider for future planning based on technical feasibility and capital costs only. Neither life cycle analyses, nor operations and maintenance (O&M) costs and energy costs were generated. Furthermore, social, environmental, and legal aspects of each alternative were not considered. Finally, one should keep in mind that several wastewater districts and communities in Macomb County have direct, long-term (typically 30-year) water and wastewater contracts with the Detroit Water & Sewerage Department (DWSD) currently in-place. The challenges in potentially cancelling those contracts have not yet been fully vetted in our studies.

The scope of the alternatives contemplated in the initial evaluations broadly included: 1) the acquisition of existing DWSD system assets specifically serving Macomb County communities, along with necessary immediate improvements; and 2) the construction of new collection and treatment facilities as required for completely independent systems. It should be noted that possible sites for new treatment facilities to serve only Macomb County have yet to be located.

Initial planning-level capital cost estimates for independent water and sewerage systems range from roughly $500M to $2.0B, <u>for each system,</u> depending on the alternative considered and the assumptions made. If existing DWSD assets can be acquired and rehabilitated (where necessary), then the capital costs are expected to be substantially lower than the costs associated with constructing new facilities. However, the option of acquiring existing assets from Detroit is dependent on several variables and may prove to be precarious.

Assuming no adverse legal implications in the discontinuation of existing contractual arrangements with the DWSD, the time frame required to implement any one of these alternatives for both systems would be approximately 5 to 10 years. However, since several long-term water and sewer contracts are currently in-place and most of these contracts have roughly 25 years remaining, either the contracts would have to be canceled or the implementation of independent, Macomb County only systems would begin in approximately 20-25 years.

<u>The bottom line is this:</u> there remains several possible and technically feasible options to provide independent water supply and sewerage systems to serve Macomb County only. However, implementing these alternatives will likely be extremely expensive (i.e. in the several billion dollar range) and may be met with substantial legal and political obstacles. Although difficult to directly compare to the status quo option of staying in DWSD's system, one should be aware of the substantial costs associated with the DWSD system common-to-all revenue obligations, DWSD's capital improvement projects, and the GLWA lease payments.

Keeping the above factors in mind, we recommend commencing with the next phase of studies to better refine the cost estimates and to analyze some of the other considerations not evaluated in the initial studies.

J. Matteo, P.E., Chief Engineer, MCPWO

Summary of Possible GLWA Revenue and Expense

	Annual Cost	Term	Notes
Revenue			
From Ratepayers	TBD	n/a	
Savings from Bond Refinancing	TBD	n/a	
Expense			
O&M Expense	TBD	n/a	(1) Rebuilding 1% (30 miles) of the system each year at a cost of about $25 mil would put the cost on par with the national average; (2) DWSD's FY 2014/2015 operating budget was about $363.8 million
Debt Service Expense	TBD	n/a	This may include bonds to pay for Pension liabilties, OBEP liabilities, and capital improvements
Fixed Non-Op Expense	TBD	n/a	
Lease Payment to Detroit	$50.0 mil	40 years	Based on current total sewer & water revenues, approximately $32.5 mil comes from the region and $17.5 mil from the City of Detroit; Currently Macomb County communities account for ~16.0% of water revenues and ~9.6% of sewer revenues
Water Residential Assistance Fund	$4.5 mil	undefined	0.5% of budgeted operating revenue per year after initial year
Pension Liability	$45.3 mil	9 years	(1) This includes $2.5 mil annual administrative fee; (2) The current liability = $292.5 mil, so a one-time bonding solution may also be a possibilty
One-time Restructuring Cost	$20.0 mil	1 year	One-time restructing cost payment for pension liability
OBEB Liability	TBD	undefined	
Current Expense (not an expense of GLWA)			
Fee (Recognition of Ownership) to Detroit	$26.2 mil	indefinite	(1) $20.7 million for the rate of return for water system; $5.516 million pursuant to settlements for the sewer system; (2) This is already factored in to the current rate calculations currently set by contractual agreement; (3) This cost will be frozen as per the GLWA lease terms.

Charter Township of Clinton

29 September 2014

Dear Fellow Elected Officials:

I am attaching a resolution our board passed on September 22, 2014. I also voted for this resolution because it shows our displeasure with the way Macomb County was treated and how this promise of only 4% increases annually are not realistic.

I am also attaching my letter that encouraged the board to ask for a no vote from our board of commissioners. I still stand by my request to have you vote no, but I wanted a united board resolution indicating our displeasure with this unfair negotiation process.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Robert J. Cannon
Township Supervisor

/emv

Attachments

cc:
Clinton Township Board of Trustees

Robert J. Cannon
Supervisor

Elizabeth M. Vogel
Assistant to Supervisor

CIVIC CENTER
40700 Romeo Plank Road
Clinton Twp., MI 48038-2900
Phone: (586) 286-8000
Fax: (586) 228-1770

Resolution
Charter Township of Clinton
Macomb County, Michigan

At a regular meeting of the Clinton Township Board of Trustees held on September 22, 2014 the following Resolution was officially adopted as a permanent record of the Charter Township of Clinton.

Whereas, regional cooperation is necessary to build economies of scale for the efficient operation of a public utility water system; and

Whereas, the Detroit Water and Sewer Department serves more than 4.5 million residents in the region representing nearly half of the State of Michigan's population; and

Whereas, Macomb County residents comprise nearly 20 percent of the service area; and

Whereas, federal authorities forced negotiations and left little room for county leaders to speak up on behalf of their residents; and

Whereas, a Board is being established to make decisions that impact residents, the structure of such Board stifles our voice on issues like rate increases, proper maintenance of the system, and long-term debt and legacy costs for DWSD employees; and

Whereas, we object to payment of $50 million annually for 40 years by constituent communities and pension bonding as proposed by the Memorandum of Understanding; and

Whereas, having a voice on these issues is imperative to the welfare of our residents, we believe it's important to lend our voice to others that believe our residents deserve adequate representation.

Now Therefore Be It Resolved, that while the Clinton Township Board of Trustees objects to an unfair negotiations process, we want to ensure that at least Macomb County chooses the Board Member representing our County instead of the State's Governor choosing our representative.

Be It Further Resolved, that copies of this resolution be transmitted to the County Executive, the Public Works Director, the Macomb County Board of Commissioners and the state legislators from Macomb County.

Resolution Declared Adopted.

Robert J. Cannon
ROBERT J. CANNON, Supervisor

K. Meltzer
KIM MELTZER, CLERK

William J. Sowerby
WILLIAM J. SOWERBY, Treasurer

PAUL GIELEGHEM, Trustee

Kenneth Pearl
KENNETH PEARL, Trustee

Dean Reynolds
DEAN REYNOLDS, Trustee

Jenifer Jo West
JENIFER JO WEST, Trustee

#15

Charter Township of Clinton

CIVIC CENTER
40700 Romeo Plank Road
Clinton Twp., MI 48038-2900
Phone: (586) 286-8000
Fax: (586) 228-1770

September 22, 2014

Members of the Board:

This letter is in regards to the Great Lakes Water Authority, a regional authority that is being discussed by the Macomb County Board of Commissioners starting this Wednesday at 9:00 a.m. in the finance committee. Ultimately the County Board will vote to accept or reject the offer.

I have been approached by several elected officials for my opinion in this matter. I am glad they asked, because it is we at the Township, City, and Village level that must answer directly to our constituents—the water and sewer customers that we service.

For decades the DWSD Water and Sewer System was operated by Detroit under the supervision and ultimate control of the Federal Court. During this time, it is alleged that poor management led to bloated payrolls and excessive costs.

Now, federal judges are again pushing for a 40 year plus impact decision giving the counties only a month to take or leave the arrangement. The argument is made that savings from new lower bond issue rates and efficiencies will help offset new required payments to Detroit. However, $50,000,000 a year for at least 40 years go to Detroit which is actually being rewarded for the inefficient costly operation of the system that took place.

A huge pension bond is also required to cover an obligation of 9 years at approximately $42,000,000 a year to stabilize pensions. The governance of the new authority is patently unfair with Detroit getting all the money, yet together with Wayne County maintains three votes while three votes, at best, can be mustered by Macomb, Oakland and the Governor's office

It is too little control for far to much money, and may even seem to reward past misdeeds. Therefore, I am recommending that this board pass a motion to request our County Commissioners that represent Clinton Township, as well as the rest of Macomb County, vote NO when this issue comes before their full board.

Thank you for your consideration.
Robert J. Cannon
Supervisor

Macomb County, Michigan

Presentation on Comprehensive Financial Plan, Interim Trust Agreement and Bond Authorizing Resolution for Retiree Health Care Benefits

September 30, 2014

Prepared by Macomb County Finance Department

Macomb County, Michigan

- Structure of the Presentation
  - Recap of the project
  - What happened to allow the County to consider issuing debt to finance the unfunded liability for retiree health care
  - What has gone on so far in the process
  - What still needs to happen
  - Overview of the Comprehensive Financial Plan
  - Overview of the Interim Trust Agreement
  - Overview of the Bond Authorizing Resolution

Macomb County, Michigan

- Recap of the Project
  - Issue $263 million of general obligation bonds to fully fund the unfunded liability for retiree health care
  - Transfer up to $40 million from the General Fund and up to $30 million from the Delinquent Tax Revolving Fund to cover normal cost payments and possible unanticipated actuarial losses in future years
  - Create an Interim Trust Fund, separate and distinct from the Retiree Health Care Trust Fund, place those monies in the Interim Trust, invest the proceeds and transfer the annual required contribution from the Interim Trust to the Retiree Health Care Fund each year
  - Actual health care premiums for retirees are paid by the Retiree Health Care Trust Fund

Macomb County, Michigan

- What happened to allow the County to consider issuing debt to finance the unfunded liability for retiree health care
  - The retiree health care plan was closed in 2013 to new hires effective January 1, 2016 during the collective bargaining process
  - The unfunded liability was reduced from $549 million to $262 million as a result of revised actuarial assumptions in connection with closing of the plan
  - The reduction in the unfunded liability allowed the County to seriously consider financing the liability
  - Actual premium payments for retiree health care are expected to exceed the debt service payments on the proposed bonds by the year 2016

Macomb County, Michigan

- What has happened so far in the process
  - Several presentations to the Board of Commissioners dating back to February of this year
  - Several discussions with officials from Oakland County to talk about their experience
  - Financial advisor and bond counsel retained after competitive bids were solicited
  - Competitive bids were solicited for senior underwriting firms. Bids were received from eight (8) firms, three (3) were interviewed and JP Morgan is being recommended as senior underwriters based a a combination of experience, interest rates and fee structure.

Macomb County, Michigan

- What still needs to happen
  - The Comprehensive Financial Plan needs to be approved by the Board of Commissioners
  - The Bond Authorizing resolution needs to be approved by the Board of Commissioners
  - The Interim Trust needs to be approved by the Board of Commissioners
  - The Comprehensive Financial Plan needs to be submitted and approved by the State of Michigan
  - The bonds will need to receive a minimum rating of AA from at least one (1) rating agency
  - A decision needs to be made whether or not the County can finance the portion of the unfunded liability that pertains to Marta T. Berry employees.

Macomb County, Michigan

- Overview of the Comprehensive Financial Plan
  - The Plan contains a number of schedules regarding legal debt margin and the historical funding status of the pension and retiree health care plans for the past several years as well as descriptions of the benefits offered under each of those plans. This information was extracted from the County's annual audited financial statements and includes information relative to Martha T. Berry
  - Key elements of the plan include:
    - Page 1 - Legal debt margin - State statute allows municipalities to have outstanding debt up to 10% of the assessed value of property in its jurisdiction. As indicated on page 1 of the Plan, the County is authorized to have outstanding debt not in excess of $2.6 billion. The amount outstanding at 09-01-2014 was $268 million, or 1% of the amount allowed by law. The proposed issue would increase the outstanding amount to approximately 2% of the total allowed by law.

Macomb County, Michigan

- Overview of the Comprehensive Financial Plan (continued)
  - Key elements of the plan include:
    - Pages 2-3 – Description of the Pension Plan and Related Schedules of Funding Progress
    - Pages 4-5 – Description of the Retiree Health Care Plan covering General, Sheriff and Martha T. Berry employees and related schedules of funding progress
    - Page 6 – Description of numerous actions taken by the County in previous years to mitigate pension and health care costs
    - Page 7 - Description of the Retiree Health Care Plan covering Department of Roads employees and related schedules of funding progress.
      - Item of note: The Department of Roads has contributed over 100% of the required contribution to their Retiree Health Care Plan each of the past seven (7) years.

Macomb County, Michigan

- Overview of the Comprehensive Financial Plan (continued)
  - Key elements of the plan include:
    - Pages 8-9 – Bond issuance considerations
      - Page 9 – Debt service payments are expected to be approximately $5.5 million less than the unfunded liability payment each year starting in 2016.
    - Pages 10 – Budgetary impact and ability to pay
      - Debt service payments on the proposed bonds are expected to be less than actual retiree health care premium payments by 2016.
      - The debt service on the proposed bonds has been built into the 2015 budget and the County's long-range financial forecasts. The amount was originally projected to be $18.4 million and is now expected to be $17.2 million
      - The plan calls for the General Fund to contribute $40 million to the Interim Trust. This would reduce the fund balance of the General Fund by approximately 50% but would still leave the General Fund with a healthy fund balance of $41 million, or 22% of 2014 expenditures.

Macomb County, Michigan

- Overview of the Comprehensive Financial Plan (concluded)
  - Key elements of the plan include:
    - Page 11 – Outlines the various required elements of the Plan and how the Plan complies with each of them
    - Other documents in the plan include:
      - Appendix A - Actuarial valuation of the Pension Plan as of December 31, 2012 (most recent)
      - Appendix B - Actuarial valuation of the Retiree Health Care Plan as of December 31, 2013
      - Appendix C – Cash flow analysis of the Retiree Health Care Plan through 2061
      - Appendix D – Debt Service schedules on the proposed bonds

Macomb County, Michigan

- Overview of the Interim Trust Agreement
  - Why do we want an Interim Trust Fund, why not simply deposit the bond proceeds and the monies contributed by the General Fund and the Delinquent Tax Revolving Fund directly into the Retiree Health Care Fund.
    - The answer is FLEXIBILITY. Flexibility to use the funds for other pension and health care related expenditures in the event the Retiree Health Care Plan becomes overfunded in the future.

Macomb County, Michigan

- Overview of the Interim Trust Agreement (continued)
  - Key provisions of the Interim Trust
    - Article 2(a) - Composition of the Interim Trustees
      - County Executive or their designee
      - Chair of the Board of Commissioners or their designee
      - County Treasurer or their designee
      - County Finance Director
      - One Trustee appointed by the County Executive
      - One Trustee appointed by the Board of Commissioners
      - These are the same members as the Retiree Health Care Board

Macomb County, Michigan

- Overview of the Interim Trust Agreement (continued)
  - Key provisions of the Interim Trust (continued)
    - Article 4 – Permitted Uses of Trust Assets
      - Contributions to the Retiree Health Care Fund to pay for health care benefits and administrative costs
      - Pay the administrative costs of the Interim Trust
      - Call or redeem the bonds should the Retiree Health Care Fund become fully funded
      - Make contributions to the Defined Benefit Pension Plan if the Retiree Health Care fund becomes overfunded
      - Make contributions to a Defined Contribution Pension Plan that will be established by the County in connection with the closure of the Defined Benefit Pension Plan effective January 1, 2016
      - Other health or fringe benefits

Macomb County, Michigan

- Overview of the Interim Trust Agreement (concluded)
  - Key provisions of the Interim Trust (concluded)
    - Article 5(d) – Distributions to the Retiree Health Care Fund
      - Made at the direction of the Administrator of the Retiree Health Care Fund, which is the County Finance Director
      - Must be made at least once a year but may be made more frequently if so desired
    - Article (e) – Accounting Matters
      - The County Finance Director is responsible for maintaining accurate books and records of the Interim Trust
      - An annual financial report must be prepared no later than 120 days after year end (Dec 31) and provided to both the Interim Trustees and the Retiree Health Care Board.

County of Macomb

State of Michigan

Comprehensive Financial Plan
for Pension and
Retiree Health Care Benefits

September 25, 2014

DRAFT

TABLE OF CONTENTS

Comprehensive Financial Plan

This Comprehensive Financial Plan (the "Plan") is being prepared pursuant to Act 329, Public Acts of Michigan, 2012 ("Act 329"). In accordance with Act 329, the County of Macomb (the "County"), has chosen to issue bonds to finance all or a portion of the County's unfunded post-employment health care liability for all of its employees except of the Department of Roads. Post-employment health care benefits for employees of the Department of Roads are provided through a separate plan administered by Michigan Employees' Retirement System ("MERS").

The County qualifies to issue such Bonds as the County meets the minimum bond rating requirement of Act 329 and has the legal capacity to issue bonds in the required amount. The County's outstanding limited tax general obligation bond ratings, which exceed the minimum rating requirements of Act 329, are shown in the table below. Copies of the rating rationales referenced above are included in Appendix E herein.

Macomb County Ratings		
	Moody's	Standard & Poor's
Limited Tax General Obligation Rating	Aa1	AA+
Outlook	Stable	Stable
Date Last Review Completed	1/17/2014	11/20/13

As noted above, the County has the legal debt capacity to issue bonds to fund the Retiree Health Care liability, as computed below:

LEGAL DEBT MARGIN COMPUTATION		
2014 State Equalized Value (SEV)		$26,233,186,099
Legal Debt Limit - 10% of SEV		$2,623,318,610
Building Authority Debt	$37,255,000	
Special Assessment Debt	$227,820,000	
Michigan Transportation Fund Debt	$3,070,000	
Total Bonded Debt Outstanding as of 9/1/2014	$268,145,000	
Net Existing Debt Subject to Legal Limit		$268,145,000
LEGAL DEBT MARGIN AVAILABLE		**$2,355,173,610**

PENSION PLAN

The County sponsors and administers the Macomb County Employees' Retirement System (the "System"), a single employer defined benefit plan covering substantially all of the County's employees. The System's membership as of December 31, 2012 consisted of 2,591 retirees and beneficiaries currently receiving benefits, 235 deferred members entitled to benefits, but not yet receiving them, and 2,079 active employees, for a total System membership of 4,905.

Retirement Benefits:

The following is a summary of the benefits provided to the members of the System. All members become vested in the System after 8 or 15 years of service, depending on their date of hire.

> General County – Virtually all employees hired on or before December 21, 2001 may retire if their age plus years of service equals or exceeds 70 and they have attained a minimum age of 50. The annual retirement benefit, payable monthly for life, is computed at 2.4% of final average compensation for the first 26 years of service and 1% for every year thereafter, with a maximum employer pension of 65% of final average compensation. Employees hired on or after January 1, 2002 and certain employees hired before that date not covered by provisions described above may retire at age 55 with 25 or more years of service or age 60 with 8 years of service. The annual retirement benefit, payable monthly for life, for these employees is computed at 2.2% of final average compensation for each year of service, with a maximum employer pension of 66% of final average compensation.

> Sheriff Department – Employees may retire at any age with 25 or more years of service or at age 60 with 8 years of service. The annual retirement benefit for the Sheriff and deputies, payable monthly for life, is computed at 2.64% of final average compensation multiplied by credited years of service with a maximum employer pension of 66% of final average compensation. The factor for the undersheriff, jail administrator, command officers, corrections officers and dispatchers is 2.4% for the first 26 years of service and 1% for every year thereafter, with a maximum employer pension of 66% of final average compensation.

> Department of Roads – Employees may retire at age 55 with 25 or more years of service, at age 60 with 8 years of service or at age 55 if their age plus years of service equals or exceeds 70. The annual retirement benefit, payable monthly for life, is computed at 2.4% of final average compensation for the first 26 years of service and 1% for every year thereafter, with a maximum employer pension of 65% of final average compensation.

The System also provides death and disability benefits. If an employee leaves covered employment or dies before they are vested, accumulated employee contributions plus interest at the rate of 3.5% per year is refunded to the employee or designated beneficiary.

Funding Policy:

The System's funding policy provides for periodic employer contributions at actuarially determined amounts that, expressed as percentages of annual covered payroll, are designated to accumulate sufficient assets to pay benefits when due. As shown in the table below, the County's required contribution for 2013 was $19,932,742. Administrative costs of the System are financed from investment earnings. General County, Department of Roads, and Martha T. Berry Medical Facility employees contribute 2.5% or 3.5% of their annual salary. Sheriff employees contribute 4.0% of their annual salary. The County contributes the remaining amounts necessary to fund the System, using an actuarial basis specified by statute.

Fiscal Year Ended	Annual Pension Cost (APC)	Percentage Contributed	Net Pension Obligation
12/31/2013	$19,932,742	100%	$0
12/31/2012	$16,604,841	100%	$0
12/31/2011	$16,050,489	100%	$0
12/31/2010	$15,170,777	100%	$0
12/31/2009	$18,507,521	100%	$0

As shown in the table below, as of December 31, 2012, which was the most recent actuarial valuation date, the defined benefit plan was 91.7% funded. As of December 31, 2012, the actuarial accrued liability for benefits was $867,218,699 and the actuarial value of assets was $795,605,544, resulting in an unfunded liability of $71,613,155. Covered payroll was $105,391,874, and the ratio of the UAAL to covered payroll was 67.95%

The table below shows a ten year history of the County's funding of its retirement system.

Fiscal Year Ended	Actuarial Acccrued Liability (AAL)	Actuarial Value of Assets	Unfunded AAL (overfunded)	Funded Ratio	Covered Payroll	UAAL to Payroll
12/31/2012	$867,218,699	$795,605,544	$71,613,155	91.7%	$105,391,874	67.9%
12/31/2011	$854,323,946	$828,692,442	$25,631,504	97.0%	$108,900,180	23.5%
12/31/2010	$837,167,835	$862,915,501	($25,747,666)	103.1%	$110,795,240	-23.2%
12/31/2009	$814,563,728	$866,356,598	($51,792,870)	106.4%	$116,522,938	-44.4%
12/31/2008	$805,888,089	$855,265,571	($49,377,482)	106.1%	$121,822,674	-40.5%
12/31/2007	$772,649,767	$847,305,155	($74,655,388)	109.7%	$126,696,252	-58.9%
12/31/2006	$721,657,669	$781,450,248	($59,792,579)	108.3%	$128,820,986	-46.4%
12/31/2005	$682,144,687	$719,336,871	($37,192,184)	105.5%	$134,886,588	-27.6%
12/31/2004	$664,487,155	$674,857,869	($10,370,714)	101.6%	$134,258,243	-7.7%
12/31/2003	$624,212,027	$639,624,122	($15,412,095)	102.5%	$127,235,644	-12.1%

The main actuarial assumptions used in preparing the actuarial valuation of the plan as of December 31, 2012 included:

- A 7.5% investment rate of return
- Projected salary increases of 5.0% per year compounded annually
- Additional salary increase ranging from 1% to 7% for various members per year
- An assumption that benefits would not increase in the future
- A 5 year smoothing of investment returns

RETIREE HEALTH CARE PLANS

The County sponsors and administers a single employer defined benefit postretirement health care plan that provides certain health care benefits for retirees and their spouses receiving a pension from the Macomb County Employees Retirement System. However, as of January 2016, the retiree health care plan will be closed to newly hired employees. The benefit provisions are established by the County Board of Commissioners and may be amended in accordance with the County policy. Hospitalization insurance is provided through insurance companies, whose premiums are based on the benefits paid during the year. The County finances these expenditures for General County and Sheriff Department retirees through the Retiree Health Care Trust Fund. Retirees of the Department of Roads participate in a state multiple-employer plan described below.

General County and Sheriff Department Employees

As of December 31, 2013, the date of the most recent actuarial valuation, membership consisted of:

General and Sheriff Employees Membership	
Retirees and beneficiaries currently receiving benefits	1,866
Vested Terminated Employees	222
Deferred Retirement Option Plan	359
Active employees covered by the plan	1,797
Total membership	4,244

Plan members are required to contribute 25% of the cost of vision and dental coverage as well as co-pays for prescription drugs. The County contributes the balance of actual current costs for these and all other benefits and administrative expenses of the plan. The County has also contributed additional amounts to pre-fund the benefits in the past when it was able to do so. The total cost of retiree health care benefits, administrative expenses of the plan and investment management fees for the year ended December 31, 2013, was $15,167,870, of which the employer contributed $14,421,739 and plan members contributed $746,131.

Fiscal Year Ended	Annual OPEB Cost	Employer Contribution	Percentage Contributed	Increase in Net OPEB Obligation	Net OPEB Obligation
12/31/2013	$44,798,997	$15,080,087	33.7%	$29,718,910	$237,488,782
12/31/2012	$51,252,293	$13,757,048	26.8%	$37,495,245	$207,769,872
12/31/2011	$42,924,982	$13,935,375	32.5%	$28,989,607	$170,274,627
12/31/2010	$45,438,196	$12,722,681	28.0%	$32,715,515	$141,285,020
12/31/2009	$42,780,750	$15,314,128	35.8%	$27,466,622	$108,569,505

As shown on the table below, as of December 31, 2013, the date of the most recent actuarial valuation, the plan was 37.1% funded. The actuarial accrued liability for benefits was $417,782,617 and the market value of assets in the plan was $155,145,734 resulting in an unfunded accrued liability (UAL) of $262,636,883.

Actuarial Year	Actuarial Acccrued Liability (AAL)	Value of Assets	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL to Payroll
12/31/2013	$417,782,617	$155,145,734	$262,636,883	37.1%		
12/31/2012	$679,928,682	$130,289,669	$549,639,013	19.2%	$91,150,925	603.0%
12/31/2010	$745,671,057	$113,732,259	$631,938,798	15.3%	$97,650,493	647.1%
12/31/2008	$595,309,199	$77,353,942	$517,955,257	13.0%	$107,373,375	482.4%
12/31/2006	$643,208,474	$106,476,217	$536,732,257	16.6%	$113,523,878	472.8%

The main actuarial assumptions used in determining the actuarial valuation as of December 31, 2013, included:

- The individual entry age normal cost method
- A 7.50% investment rate of return
- A 9.0% increase in health care costs in year 1, reduced each year thereafter until 4.0% is reached in the tenth year and beyond
- A wage inflation rate of 4.0% per year

ACTIONS TAKEN TO CONTROL COSTS

The County has taken many steps to control current and future employee and related cost. Some of the key steps taken by the County to control costs include the following:

Employee Health care concessions:
- 2006 - eliminated Blue Cross traditional coverage for new hires
- 2006 - increased co-pays and deductibles
- 2009 - employee deductibles increased from 10% to 20%
- 2012 - monthly premium payments required for new hires

Retiree Health care concessions:
- 2008 - vesting period increased from 8 to 15 years for new hires and 20 years for spousal coverage
- 2010 - switched to fully insured HMO Plan for Medicare eligible retirees
- 2012 - spouses of new hires no longer eligible for retiree health care
- 2013 - retiree coverage adjusts with active employees coverage
- 2016 - retiree health care closed to new hires

Pension:
- 2009 - Rule of 70 allowing employees to retire when age and years of service totaled 70 eliminated for employees hired after 2001
- 2009 - Final average compensation period extended from 4 to 5 years for employees hired after 2001
- 2009 – multipliers reduced from 2.4 to 2.2 for employees hired after 2001
- 2016 – defined benefit plan closed to new hires

Salaries & Wages
- 2007 to 2016 – wage freeze
- 2009 to 2013 – 6 furlough days required for all employees
- 2009 to 2013 longevity suspended
- 2013 longevity reinstated at reduced levels. Vesting period increased from 5 years of service to 15 years of service.

The County continues to be dedicated to finding ways to reduce costs, including, among other things, health care cost for both its active employees and retirees.

Department of Roads Employees

The Macomb County Department of Roads provides health care benefits to its retirees and their beneficiaries in accordance with labor contracts. The benefits are administered by the Michigan Employers' Retirement System (MERS), an agent multiple employer pension and other post-employment benefits plan.

The Department of Roads pays 100% of the cost of providing health care benefits to its retirees and beneficiaries. The current cost of these benefits was $3,087,979 for the year ended September 30, 2013. The Department of Roads has no obligation to make contributions in advance of when insurance premiums are due. However, it did contribute an additional $3,000,000 toward future benefits during the year ended September 30, 2013.

The following are tables showing the Department's contribution and funding progress of its post-employment health benefits plan over the past several years.

Fiscal Year Ended	Annual OPEB Cost	Employer Contribution	Percentage Contributed	Increase in Net OPEB Asset	Net OPEB Asset
9/30/2013	$5,708,955	$6,087,979	106.6%	$379,024	$4,322,149
9/30/2012	$6,054,090	$7,566,212	125.0%	$1,512,122	$3,943,125
9/30/2011	$5,765,799	$7,033,418	122.0%	$1,267,619	$2,431,003
9/30/2010	$6,617,951	$6,846,908	103.5%	$228,957	$1,163,384
9/30/2009	$6,302,811	$8,258,255	131.0%	$1,955,444	$934,427

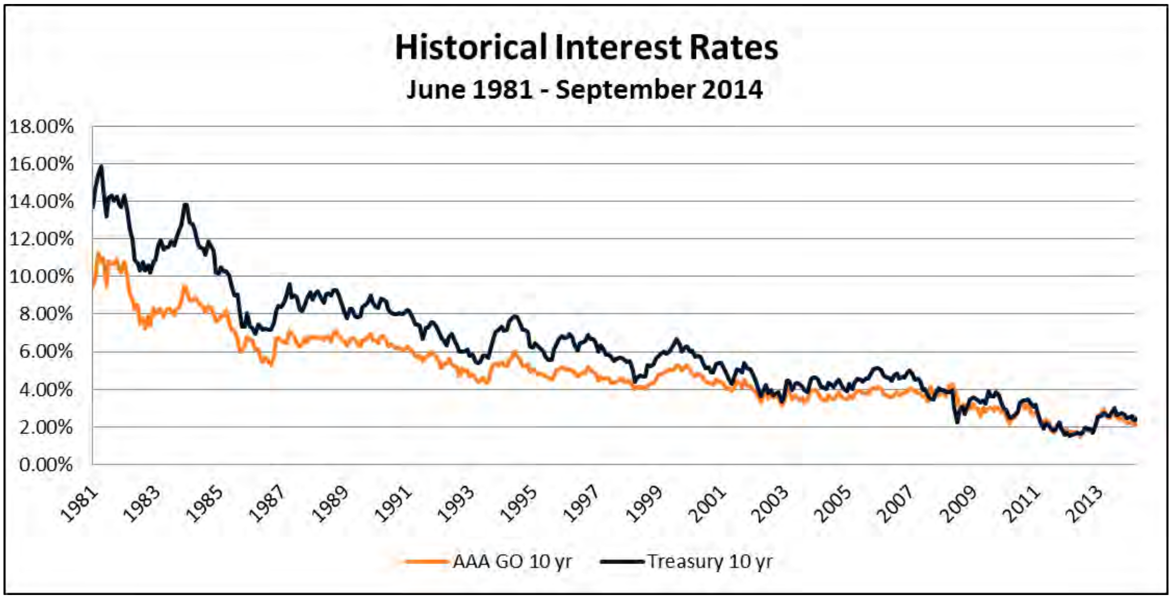
Actuarial Year	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets	Unfunded Accrued Liability (UAL)	Funded Ratio	Covered Payroll	UAL
12/31/2011	$90,532,651	$23,547,047	$66,985,604	26.0%	$12,613,964	531.0%
12/31/2009	$83,364,455	$15,047,927	$68,316,528	18.1%	$14,421,101	473.7%
12/31/2007	$87,898,593	$9,621,290	$78,277,303	10.9%	$14,621,336	535.4%

BOND ISSUANCE CONSIDERATIONS

The County intends to issue bonds as authorized by Act 329 to partially or fully fund the unfunded liability for its retiree health care benefits for General County, Martha T. Berry Medical Care Facility and Sheriff Department employees. The estimated bond amount, assuming funding the full UAAL with bond proceeds is $263,755,000 as computed below:

Estimated Bond Size	
Deposit to Interim Trust (Amount of UAAL)	$262,636,883
Estimated Costs of Issuance	$1,113,743
Contingency	$4,374
Total Estimated Bond Amount	$263,755,000

Given the historically low interest rates, as shown below, the County anticipates receiving favorable interest rates for the Other Post Employment Benefit Obligation Bonds it intends to issue.



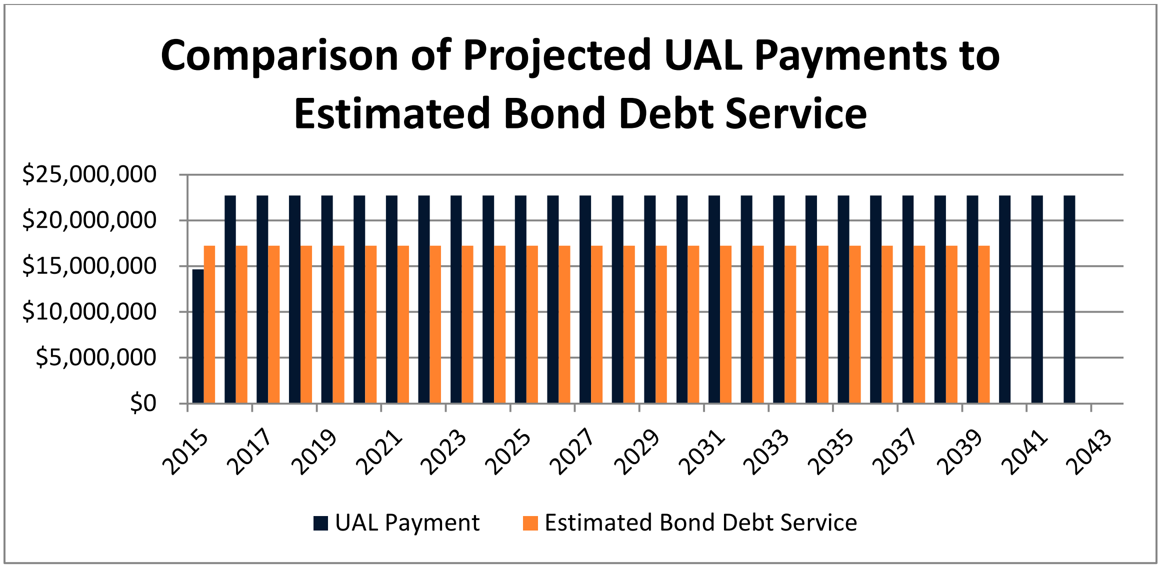
The County recognizes that the value of assets and liabilities may change depending on market conditions and actuarial experiences differing from projections, respectively. The County recognizes that such changes may result in additional required contributions to the plans than those currently being projected. The County also recognizes that such changes may also result in the plan becoming overfunded.

Assuming the health care obligation bonds are issued for 25 years under current interest rates, the estimated annual bond payments are expected to be approximately $17.23 million dollars. Provided below is a comparison of the annual unfunded accrued liability amortization payment, provided by Gabriel Roeder Smith & Company ("GRS"), to the estimated annual bond payments.

25 Year Bond Amortization - Level Debt - Market Rates				
Fiscal Year Ending 12/31	UAL Payment	Bond Payments**	Difference	Present Value @ 4.36%
2015	$14,643,261	$17,228,733	($2,585,472)	($2,471,295)
2016	22,714,864	17,227,091	5,487,773	5,026,282
2017	22,714,864	17,230,536	5,484,328	4,813,268
2018	22,714,864	17,226,665	5,488,199	4,615,432
2019	22,714,864	17,225,817	5,489,047	4,423,290
2020	22,714,864	17,228,096	5,486,769	4,236,733
2021	22,714,864	17,228,468	5,486,396	4,059,453
2022	22,714,864	17,228,092	5,486,772	3,890,122
2023	22,714,864	17,229,052	5,485,812	3,726,947
2024	22,714,864	17,227,801	5,487,063	3,572,055
2025	22,714,864	17,227,523	5,487,341	3,422,993
2026	22,714,864	17,226,729	5,488,135	3,280,460
2027	22,714,864	17,230,216	5,484,648	3,141,410
2028	22,714,864	17,225,551	5,489,313	3,012,728
2029	22,714,864	17,228,126	5,486,738	2,885,506
2030	22,714,864	17,227,892	5,486,972	2,765,072
2031	22,714,864	17,227,381	5,487,483	2,649,798
2032	22,714,864	17,227,449	5,487,415	2,539,062
2033	22,714,864	17,226,951	5,487,913	2,433,205
2034	22,714,864	17,229,625	5,485,239	2,330,414
2035	22,714,864	17,227,117	5,487,747	2,234,074
2036	22,714,864	17,227,487	5,487,377	2,140,593
2037	22,714,864	17,225,759	5,489,105	2,051,808
2038	22,714,864	17,230,291	5,484,573	1,964,464
2039	22,714,864	17,229,444	5,485,420	1,882,682
2040	22,714,864	0	22,714,864	7,470,388
2041	22,714,864	0	22,714,864	7,158,287
2042	22,714,864	0	22,714,864	6,859,224
2043	0	0	0	0
	$627,944,589	**$430,697,890**	**$197,246,699**	**$96,114,455**

* Based on 30-Year Amortization submitted by GRS - not including normal cost

** Estimate only based on market conditions on September 09, 2014



Based on the proceeding analysis, as well as other considerations, the County has determined that it is financially beneficial to pursue the issuance of health care obligation bonds to fully fund the UAL based on the market value of assets in the amount of $262,636,833, plus the costs to issue the Bonds.

BUDGETARY IMPACT AND ABILITY TO MEET OBLIGATIONS

The budget for the County, including the General Fund, is typically adopted by the Board of Commissioners in September of the previous year but may be adopted earlier if so desired. The 2015 budget includes debt service payments of $18,400,000 million on the proposed borrowing and was adopted on September 11, 2014 with a slight surplus of $1,193. This borrowing has also been factored into the County's long-range financial forecasts. Undesignated fund balance of the General Fund was $81,028,960 as of December 31, 2013, or 44% of 2013 expenditures. The annual debt service payments will be spread to the various funds of the County based on each fund's percentage of employees that participate in the health care plan. The security for the debt will be a first budget obligation of the County.

As indicated previously, the actual cost of premium payments and administrative expenses was approximately $15.2 million for the year ended December 31, 2013. The County expects these amounts to exceed the annual debt service requirements on the proposed bonds by the year 2016.

PLAN COMPLIANCE

As outlined in Act 329, the Plan contains the following elements:

- **An analysis of the current and future obligations with respect to each retirement program of the County**. The County has one defined benefit pension plan that covers substantially all of the County's employees. A copy of the most recent actuarial report for the plan is contained within Appendix A.

- **An analysis of the current and future obligations with respect to each postemployment health care plan of the County.** The County has two defined benefit health care plans. The first health care plan covers the General County, Sheriff Department, and Martha T. Berry Medical Facility employees, and the second plan covers the Road Department employees. The Department of Roads bears 100% of the cost of providing health care benefits to its employees. The most recent actuarial report with respect to the Macomb County Retiree Health Care Plan is contained within Appendix B.

- **Evidence that the issuance coupled with any other legally available funds, is sufficient to eliminate the unfunded accrued health care liability.** The unfunded accrued health care liability provided by Gabriel Roeder Smith & Company, as of December 31, 2013, is $262,636,883. The Sources and Uses of Funds provided by the County's Financial Advisor, Public Financial Management ("PFM"), demonstrate that the bond proceeds will fully cover the liability of $262,636,883. The Sources and Uses as well as cash flow projections are provided under Appendix C.

- **The debt service amortization schedule**. The preliminary debt service amortization schedules for the Health Care Obligation Bonds provided by PFM can be found under Appendix D.

- **A description of actions required to satisfy the debt service amortization schedule.** The health care obligation bonds are a limited tax general obligation of the County, and are paid from various County funds. A full description of the actions for the County to satisfy its debt service obligations is provided on page 10 herein.

- **A plan to mitigate the increase in health care costs.** The plan can be found on page 6 herein.

- **Certification that the Comprehensive Financial Plan is complete and accurate.** A certification from the County Finance Director attesting that the Plan is complete with information provided by reliable sources provided below.

Act 329 also requires the Plan be prepared and made publically available. Accordingly, the County has prepared this Plan, which has been approved by the County Board on September 30, 2014, and has been made available for public review.

CERTIFICATION

The County has prepared this Comprehensive Financial Plan for Pension and Other Post-Employment Benefits as required under Act 329 for the issuance of Health Care Obligation Bonds. In preparing this plan, information has been obtained from the Gabriel Roeder Smith & Company, and Public Financial Managment. The County believes the information provided by these firms to be reliable.

I certify that this Comprehensive Financial Plan is complete and accurate to the best of my knowledge and belief.

____

By:

Dated: September 30, 2014

Appendix A: December 31, 2012 Actuarial Valuation for the Macomb County Employees Retirement System

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

MACOMB COUNTY EMPLOYEES RETIREMENT SYSTEM

SIXTY-SEVENTH ANNUAL ACTUARIAL VALUATION

DECEMBER 31, 2012

CELEBRATING 75 YEARS GRS 75 SINCE 1938

CONTENTS

GRS

Gabriel Roeder Smith & Company
Consultants & Actuaries

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July 12, 2013

The Retirement Commission
Macomb County Employees Retirement System
Mount Clemens, Michigan

Re: Macomb County Employees Retirement System Actuarial Valuation as of December 31, 2012

Ladies and Gentlemen:

The results of the December 31, 2012 annual actuarial valuation of the Macomb County Employees Retirement System are presented in this report. The purpose of the valuation is to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending December 31, 2014, and to provide actuarial information for Governmental Accounting Standards Board (GASB) Statements. This report should not be relied upon for any other purpose. This report may be provided to parties other than the System only in its entirety and only with the permission of the Commission.

The valuation was based upon information furnished by the County, concerning Retirement System benefits, financial transactions, plan provisions, active members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the information provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Macomb County Employees Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. The undersigned are independent of the plan sponsor and are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Louise Gates Mark Buis Pieterse

Louise Gates, ASA, MAAA   Mark Buis, FSA, MAAA   Francois Pieterse, ASA, MAAA

LG/MB:mrb

SECTION A

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1. Required Employer Contributions - Fiscal Year Beginning January 1, 2014

The computed employer contributions are as follows:

Division	Computed Employer Contributions* % of Payroll	$ Based on Projected Payroll
General County	15.42%	$ 12,237,576
Sheriff's Department	20.90	5,923,380
Road Commission	24.48	3,193,455
Martha T. Berry MCF	12.05	798,409

* *Contribution rates are calculated as a percentage of the payroll of all active members (including those in the DROP). Dollar contributions are based on projected valuation payroll.*

Additional detail on these contributions is shown on page B-2.

2. Contribution Rate Comparison

Division	Valuation as of December 31 2011	2012
General County	13.22%	15.42%
Sheriff's Department	17.83	20.90
Road Commission	21.46	24.48
Martha T. Berry MCF	10.56	12.05

3. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the Plan. The second is a change in the valuation assumptions used to predict future occurrences. The third is the effect of differences during the year between the Plan's actual experience and what the assumptions predicted.

The following benefit changes are reflected in this valuation of the Retirement System:

- Employees of the Martha T. Berry (MTB) division and all General division employees hired after 2011 may retire upon completing 15 years of service and attaining age 60 (a.k.a. 60 & 15 retirement). In addition, these individuals become vested after completing 15 years of service.
- Individuals in these divisions hired before 2012 are subject to the prior retirement and vesting eligibility conditions ("60 & 8" retirement and 8-year vesting). In addition, all General and MTB division employees who are not vested as of December 31, 2012 will not be eligible to participate in the Deferred Retirement Option Plan in the future.
- All Sheriffs' department employees (except for Corrections department deputies) who are hired or promoted after various dates in 2010 must complete 15 years of County service to become vested in their pension benefits. In addition, these individuals may retire upon completing 15 years of service and attaining age 60.

The appendix of this report has additional details of these benefit provisions. These changes affected a small number of active plan members reported in connection with this valuation of the System. As a result, these changes had a small impact on contribution results.

In addition, there were no changes in the assumptions used in the actuarial valuation of the System. The changes in contribution amounts over the prior year are due primarily to Retirement System experience.

4. 2012 System Experience

One way the System's experience affects costs is the effect it has on the unfunded accrued liability. This is referred to as the experience gain or loss for the year. During calendar year 2012, the return on fund assets was higher than long term expectations (7.5% per year). However, the market smoothing techniques used in this valuation of the System recognize past and present investment experience. As a result, the recognized rate of investment return was 0.11%. This adverse experience was partially offset by lower than assumed pay increases during 2012.

5. Year 2012 Funding Position

The change in funding position over the prior year is due primarily to the unfavorable experience during calendar year 2012. This year valuation assets represent 92% of accrued liabilities; last year the ratio was 97%.

6. Looking Ahead

As of December 31, 2012 the funding value of assets was 101% of market value. This means that meeting the actuarial investment return assumption in the near term will require average future market returns that exceed the 7.5% investment return assumption.

7. Retiree Reserve Balance

The retiree liabilities for all divisions are larger than the assets allocated to the retiree reserve balances as of December 31, 2012. The liabilities and reserves are shown below:

	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
Retiree Liability	$345,822,851	$125,607,213	$75,210,735	$24,263,677
Retiree Reserve	318,209,305	104,429,267	83,200,145	19,056,015
Unfunded Liability	$ 27,613,546	$ 21,177,946	$(7,989,410)	$ 5,207,662

As of the valuation date, there is a shortfall in the retiree reserve for all groups, except for the Road Commission. We recommend assets equal to the unfunded liabilities for the General, Sheriff's and MTB groups be transferred from the Retirement System employer reserve to fully fund the retiree liability.

SECTION B

VALUATION RESULTS AND COMPARATIVE INFORMATION

FINANCIAL OBJECTIVE

The financial objective of the Retirement System is to establish and receive contributions, expressed as a percentage of active member payroll, which will follow the expected pattern from year-to-year and will not have to be increased substantially for future generations of taxpayers. Your annual actuarial valuations determine how well the objective is being met.

The Retirement Commission of the Macomb County Employees Retirement System confirms that the System provides for payment of the required employer contribution as described in Section 20m of Michigan Public Act No. 728.

CONTRIBUTION RATES

The Retirement System is supported by contributions from the employers and active members and by the investment income earned on System assets. Most General members and Martha T. Berry MCF members hired before January 1, 2002 contribute 3.5% of their pay (RN's and LPN's contribute 2.5% of their pay) and all General members and Martha T. Berry MCF members hired on or after January 1, 2002 contribute 2.5% of their pay. All Road Commission members contribute 3.5% of their pay. The Sheriff's Department members contribute 4.0% of their pay. The employer provides an actuarially determined contribution, the remainder needed to meet the financial objective.

Member and employer contributions cover both (i) normal cost, and (ii) the financing of the unfunded accrued liability over a period of future years. The normal cost is the portion of System costs allocated to the current year by the valuation method described in Section D. The unfunded accrued liability is the portion of system costs not covered by present system assets and future normal costs.

The contribution requirements for the fiscal year beginning January 1, 2014 are presented on pages B-2 and B-3.

CONTRIBUTIONS TO PROVIDE BENEFITS
MEMBER AND EMPLOYER PORTIONS
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2014

	% of Active Member Payroll*			
Contribution for	**General County**	**Sheriff's Department**	**Road Commission**	**Martha T. Berry MCF**
Normal cost:				
Age and service	12.73 %	19.43 %	15.71 %	13.42 %
Disability	0.80	0.95	1.16	0.71
Death-in-service	0.46	0.43	0.55	0.42
Total	13.99	20.81	17.42	14.55
Administrative expenses	0.10	0.10	0.10	0.10
Member contributions:				
Total**	2.07	3.59	3.50	2.60
Future refunds	0.23	0.11	0.15	0.26
Available	1.84	3.48	3.35	2.34
Employer normal cost	12.25	17.43	14.17	12.31
UAAL as a Level Percent of Payroll	3.17	3.47	10.31	(0.26)
Total Computed Employer Rate	15.42 %	20.90 %	24.48 %	12.05 %

* *Including payroll of members currently in the DROP.*
** *Weighted average.*

For each division, the unfunded actuarial accrued liabilities (UAAL) or excess assets were amortized as a level percent of payroll over a period of 20 years.

Procedures for determining dollar contribution amounts are shown on the following page.

CONVERTING CONTRIBUTION RATES TO DOLLAR AMOUNTS

For any period of time, the percent-of-payroll contribution rates need to be converted to dollar amounts. We recommend one of the following procedures.

(1) Contribute dollar amounts for a period which are equal to the employer's percent-of-payroll contribution requirement multiplied by the covered active member payroll for the period (including the payroll of the members in the DROP). Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Retirement System benefits and to include non-payroll payments that are covered compensation.

(2) **Contribute $12,237,576 for the General County, $5,923,380 for the Sheriff's Department, $3,193,455 for the Road Commission and $798,409 for Martha T. Berry MCF**. These amounts are based on the payroll information adjusted to reflect assumed payroll increases between the valuation date and the beginning of the fiscal year for which the contributions are being determined.

TIMING OF CONTRIBUTION PAYMENTS

The contributions in this report anticipate regular payments throughout the year. Examples would be at each payroll date or in 12 monthly installments. **If the employer contribution pattern is significantly different, an adjustment to the costs may be appropriate**. For example, a lump sum contribution at the beginning of the year is available for investment throughout the year and, therefore, ought to be somewhat smaller than 12 monthly payments. Similarly, a lump sum contribution at the end of the year will not generate any investment income that year and so must be greater than 12 monthly payments.

DETERMINATION OF UNFUNDED ACCRUED LIABILITY AS OF DECEMBER 31, 2012

	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
A. Accrued Liability				
1. For retirees and beneficiaries*				
a. Benefit payments	$345,822,851	$ 125,607,213	$75,210,735	$24,263,677
b. Reserves	0	0	0	0
c. Total	345,822,851	125,607,213	75,210,735	24,263,677
2. For vested terminated members	12,892,356	2,297,580	1,109,662	2,066,099
3. For present active members				
a. Value of expected future benefit payments	232,027,968	136,763,247	63,444,076	17,715,106
b. Value of future normal costs	85,442,311	51,986,761	24,542,425	10,030,374
c. Active member liability: (a) - (b)	146,585,657	84,776,486	38,901,651	7,684,732
4. Total	505,300,864	212,681,279	115,222,048	34,014,508
B. Valuation Assets	467,981,007	198,085,093	95,269,039	34,270,405
C. Unfunded Accrued Liability (Overfunding): (A.4) - (B)	37,319,857	14,596,186	19,953,009	(255,897)
D. Funding %	92.6%	93.1%	82.7%	100.8%

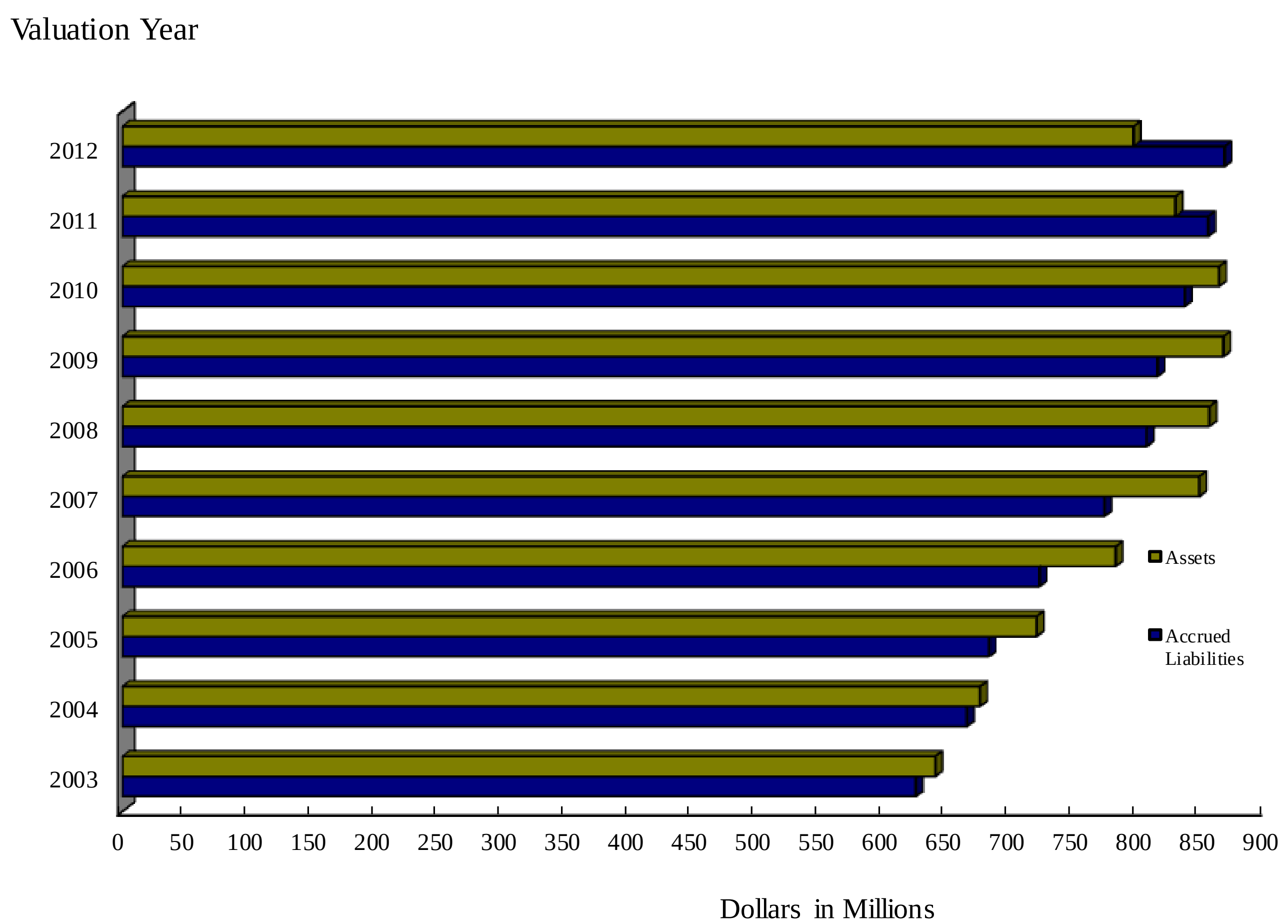
* *Includes liabilities for individuals in the DROP.*

DEVELOPMENT OF EXPERIENCE GAIN (LOSS) YEAR ENDED DECEMBER 31, 2012

Actual experience will never (except by coincidence) exactly match assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) for all divisions is shown below.

	Year Ending December 31, 2012
(1) UAAL at start of year	$ 25,631,504
(2) Normal cost	19,641,072
(3) Actual contributions	20,173,991
(4) Interest accrual	1,902,619
(5) Expected UAAL before changes:	0
(1)+(2)-(3)+(4)	27,001,204
(6) Change from benefit provisions	25,948
(7) Change in assumptions or methods	0
(8) Expected UAAL after changes:	
(5)+(6)+(7)	27,027,152
(9) Actual UAAL at end-of-year	71,613,155
(10) Gain (loss): (8)-(9)	(44,586,003)
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year	(5.2)%

ASSETS & ACCRUED LIABILITIES FOR ALL SYSTEM MEMBERS



2003 assets equaled 108% of accrued liabilities.

2012 assets equaled 92% of accrued liabilities.

COMPUTED EMPLOYER CONTRIBUTIONS
COMPARATIVE STATEMENT
GENERAL COUNTY

Valuation Date December 31	Active Members No.	Valuation Payroll Total**	Valuation Payroll Average	Valuation Payroll % Increase	Retirees & Beneficiaries* No.	Retirees & Beneficiaries* Monthly Benefits	Employer Contributions as Payroll Percents
1994 #@	1,880	$58,337,999	$ 31,031	1.8 %	720	$ 420,173	8.16 %
1995 #	1,890	61,805,904	32,702	5.4	747	452,003	7.82
1996 #	1,918	65,074,258	33,928	3.7	785	497,829	8.14
1997	1,957	68,048,675	34,772	2.5	827	554,274	6.53
1998	2,000	70,559,895	35,280	1.5	860	608,308	3.83
1999	2,027	75,078,616	37,039	5.0	861	641,816	0.63
2000 #	2,043	74,236,121	36,337	(1.9)	889	719,105	2.19
2001 #	1,866	72,321,085	38,757	6.7	911	763,689	1.11
2002 @	2,080	83,635,826	40,210	3.7	954	835,286	4.26
2003 @	2,131	87,545,515	41,082	2.2	1,072	1,080,329	9.01
2004 #	2,158	92,266,683	42,756	4.1	1,169	1,269,485	14.57
2004 #!	2,158	92,266,683	42,756	4.1	1,169	1,269,485	12.19
2005 @	2,118	91,068,299	42,997	0.6	1,294	1,587,496	11.80
2006	1,956	85,539,496	43,732	1.7	1,486	1,973,938	11.58
2007 #	1,825	83,093,296	45,531	4.1	1,652	2,262,129	11.19
2008 #@	1,546	71,003,823	45,927	0.9	1,575	2,242,888	8.55
2009 #	1,497	67,006,513	44,761	(2.5)	1,620	2,331,449	9.00
2010	1,452	64,855,997	44,667	(0.2)	1,687	2,442,026	10.57
2011	1,422	64,566,970	45,406	1.7	1,755	2,554,204	13.22
2012 #	1,334	62,604,753	46,930	3.4	1,801	2,623,505	15.42

\# *Benefit changes included in this valuation.*
@ *Actuarial assumptions or methods revised.*
* *Retiree information includes members electing DROP beginning in 2004.*
! *Amortization period revised.*
** *Excludes pay for DROP members.*

Computed Employer Contributions
Comparative Statement
Sheriff's Department

Valuation Date December 31,	Active Members No.	Valuation Payroll Total**	Valuation Payroll Average	Valuation Payroll % Increase	Retirees & Beneficiaries* No.	Retirees & Beneficiaries* Monthly Benefits	Employer Contributions as Payroll Percents
1994 #@	323	$ 14,883,102	$46,078	1.5 %	122	$ 213,243	20.22 %
1995 #	331	15,453,538	46,687	1.3	128	221,291	18.88
1996 #	338	16,640,938	49,234	5.5	131	233,601	19.24
1997	352	16,866,535	47,916	2.7	132	248,363	15.99
1998	366	18,086,823	49,418	3.1	137	264,882	11.43
1999	372	18,956,773	50,959	3.1	147	298,021	6.66
2000 #	370	20,109,034	54,349	6.7	155	330,752	5.61
2001	362	21,502,952	59,400	9.3	163	352,542	5.47
2002 @	406	23,293,023	57,372	3.4	188	452,403	13.36
2003 #@	415	24,523,879	59,094	3.0	197	494,509	16.27
2004 #	415	25,627,831	61,754	4.5	209	560,910	20.69
2004 #!	415	25,627,831	61,754	4.5	209	560,910	19.80
2005 @	438	28,029,893	63,995	3.6	220	606,501	17.56
2006	432	27,984,382	64,779	1.2	230	640,989	14.67
2007 #	426	28,981,620	68,032	5.0	237	672,103	14.15
2008	422	29,124,791	69,016	1.4	241	688,074	15.29
2009	419	28,638,488	68,350	(1.0)	248	713,854	15.66
2010	401	25,952,721	64,720	(5.3)	261	765,134	14.99
2011	390	25,162,695	64,520	(0.3)	277	834,884	17.83
2012 #	376	24,246,340	64,485	(0.1)	290	892,322	20.90

\# *Benefit changes included in this valuation.*
* *Retiree information includes members electing DROP beginning in 2004.*
@ *Actuarial assumptions or methods changed.*
! *Amortization period revised.*
** *Excludes pay for members electing DROP.*

COMPUTED EMPLOYER CONTRIBUTIONS
COMPARATIVE STATEMENT
ROAD COMMISSION

Valuation Date December 31,	Active Members No.	Valuation Payroll Total	Valuation Payroll Average	Valuation Payroll % Increase	Retirees & Beneficiaries No.	Retirees & Beneficiaries Monthly Benefits	Employer Contributions as Payroll Percents
1994 #@	274	$ 10,433,561	$38,079	0.1 %	210	$ 191,006	21.27 %
1995 #	273	10,833,071	39,682	4.2	224	230,000	20.99
1996	269	10,857,267	40,362	1.7	232	251,122	18.16
1997	266	11,170,663	41,995	4.0	243	277,451	15.28
1998	278	12,148,390	43,699	4.1	247	290,618	11.70
1999	259	11,546,310	44,580	2.0	248	303,008	7.01
2000 #	247	10,939,384	44,289	(0.7)	249	320,776	3.24
2001	287	13,155,595	45,838	3.5	252	332,187	6.98
2002 @	309	14,370,596	46,507	1.5	256	359,156	10.40
2003 @	315	15,166,250	48,147	3.5	265	393,485	14.92
2004 #	315	16,363,729	51,948	7.9	262	400,588	19.16
2004 #!	315	16,363,729	51,948	7.9	262	400,588	17.92
2005 @	295	15,788,396	53,520	3.0	265	423,833	16.08
2006	293	15,297,108	52,209	(2.5)	272	445,916	13.65
2007 #	263	14,621,336	55,594	6.5	295	511,909	13.09
2008 @	254	14,449,299	56,887	2.3	297	520,317	11.68
2009 #	245	14,421,101	58,862	3.5	302	537,968	15.09
2010	230	13,144,747	57,151	(2.9)	313	568,943	17.95
2011	216	12,613,964	58,398	2.2	325	610,220	21.46
2012 #	213	12,423,961	58,328	(0.1)	317	601,180	24.48

\# *Benefit changes included in this valuation.*
@ *Actuarial assumptions or methods changed.*
! *Amortization period revised.*

COMPUTED EMPLOYER CONTRIBUTIONS
COMPARATIVE STATEMENT
MARTHA T. BERRY MCF

Valuation Date December 31,	Active Members				Retirees & Beneficiaries		Employer Contributions as Payroll Percents
		Valuation Payroll					
	No.	Total**	Average	% Increase	No.	Monthly Benefits	
2008 #@	174	$ 7,244,761	$41,637	-	167	$ 162,643	9.20 %
2009 #	164	6,456,836	39,371	(5.4) %	171	172,128	8.19
2010	174	6,841,775	39,321	(0.1)	178	177,819	9.03
2011	170	6,556,551	38,568	(1.9)	185	188,173	10.56
2012 #	156	6,116,820	39,210	1.7	183	194,604	12.05

\# *Benefit changes included in this valuation.*
@ *Actuarial assumptions or methods changed.*
** *Excludes pay for DROP members.*

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

BRIEF SUMMARY OF ANCILLARY BENEFIT PROVISIONS (DECEMBER 31, 2012)

Eligibility	Amount

REGULAR RETIREMENT

Please refer to the Appendix.

DEFERRED RETIREMENT

Please refer to the Appendix.

NON-DUTY DEATH-IN-SERVICE

Eligibility	Amount
10 or more years of service.	Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election.

DUTY DEATH-IN-SERVICE

Eligibility	Amount
No age or service requirements. Must be in receipt of worker's compensation.	Refund of accumulated contributions. Upon termination of worker's compensation payments the same amount is paid to the spouse and to unmarried children under 18.

NON-DUTY DISABILITY

Eligibility	Amount
10 or more years of service.	Computed as a regular retirement with a minimum benefit of $400 per month.

DUTY DISABILITY

Eligibility	Amount
No age or service requirements. Must be in receipt of worker's compensation.	Computed as a regular retirement with a minimum benefit of $400 per month. During the worker's compensation period the County financed portion cannot exceed the difference between 65% of final average compensation and worker's compensation payments.

MEMBER CONTRIBUTIONS

Please refer to the Appendix.

SUMMARY OF DROP PROVISIONS

Please refer to the Appendix for DROP eligibility provisions. The other provisions of the DROP are listed below:

- The DROP is a forward DROP.
- Members can DROP when they first become eligible for an unreduced benefit.
- Upon entering the DROP, 100% of the member's monthly retirement benefit will be credited to the DROP account.
- The DROP account will be credited with the same interest rate used to accumulate member contributions (currently 3.5%).
- The maximum DROP period is five years. Members may continue to work past the maximum DROP period but no additional retirement benefits will be credited to the member's DROP account. Interest on the DROP account will continue to accrue for members working past the maximum DROP period.
- Member contributions to the Retirement System will cease upon entering the DROP.
- Upon actual retirement, the member would receive a monthly annuity equal to the accrued benefit credited to the DROP account under any form of payment available from the plan, and the lump sum amount accumulated in the DROP account. Members elect their form of payment at time of DROP.
- The monthly annuity as of the DROP date is calculated based on service, final average compensation and benefit provisions as of the DROP date less the annuity withdrawal reduction, if applicable; this amount is not changed for any subsequent changes in pay or benefit provisions. The annuity withdrawal is paid at the time of DROP.
- For POLC (Union 1 & 20) and MCDPSA (Union 26), interest is earned on the DROP account balance at the end of each month, and shall be paid to the employee's DROP account no later than the last day of the following month.
- For POLC (Union 1), effective August 20, 2010, for new entries into DROP, upon reaching the five year maximum DROP participation period, the DROP participant shall terminate his/her employment.
- For POAM (Union 7), effective August 6, 2010, an employee of Macomb County who is a member of the POAM-Deputies and Dispatchers, may voluntarily elect to participate in the DROP, upon obtaining the minimum age and service requirements for a normal service retirement.

REPORTED FINANCIAL INFORMATION
YEAR ENDED DECEMBER 31, 2012
(MARKET VALUE)

Revenues and Disbursements during 2012

Revenues:		
a. Member contributions	$ 3,569,150	
b. Employer contributions	16,604,841	
c. Interest and dividends	10,010,733	
d. Investment gains (losses)	75,777,960	
e. Total		$105,962,684
Disbursements:		
a. Refunds of member contributions	11,452,136	
b. Benefits paid	42,561,642	
c. Investment expenses	2,686,802	
d. Administrative expenses	172,929	
e. Total		56,873,509
Reserve Increase:		
Total revenues minus total disbursements		$ 49,089,175

Assets and Reserves as of December 31, 2012

Assets:		**Reserve Accounts:**	
a. Cash & payables	$ 28,834,810	a. Member contributions	$ 45,003,858
b. Short-term investments	66,215	b. Reserve for benefits	
c. Government bonds	0	now being paid	524,894,732
d. Corporate bonds	130,666	c. Reserve for future	
e. Stocks	662,847,131	benefits	213,608,936
f. Real estate	96,058,632	d. Supplemental reserve	4,429,928
g. Limited partnerships	0		
Total	$787,937,454	Total	$787,937,454

DETERMINATION OF VALUATION ASSETS

Year Ended December 31:	2011	2012	2013	2014	2015	2016
A. Funding Value Beginning of Year	$862,915,501	$828,692,442				
B. Market Value End of Year	738,848,279	787,937,454				
C. Market Value Beginning of Year	785,197,989	738,848,279				
D. Non-Investment Net Cash Flow	(35,472,385)	(34,012,716)				
E. Investment Income						
E1. Market Total: B - C - D	(10,877,325)	83,101,891				
E2. Amount for Immediate Recognition (7.5%)	63,388,448	60,876,456				
E3. Amount for Phased-In Recognition: E1-E2	(74,265,773)	22,225,435				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.2 x E3	(14,853,155)	4,445,087				
F2. First Prior Year	5,545,340	(14,853,155)	$ 4,445,087			
F3. Second Prior Year	8,020,345	5,545,340	(14,853,155)	$ 4,445,087		
F4. Third Prior Year	(63,108,255)	8,020,345	5,545,340	(14,853,155)	$ 4,445,087	
F5. Fourth Prior Year	2,256,603	(63,108,255)	8,020,347	5,545,338	(14,853,153)	$ 4,445,087
G. Total of Items F1 - F5	(62,139,122)	(59,950,638)	3,157,619	(4,862,730)	(10,408,066)	4,445,087
H. Funding Value End of Year: A + D + E2 + G	828,692,442	795,605,544				
I. Difference between Market & Funding Value	(89,844,163)	(7,668,090)	(10,825,709)	(5,962,979)	4,445,087	0
J. Recognized Rate of Return - Funding Value Basis (G+E2)/(1/2*(A+H-(G+E2)))	0.15%	0.11%				
K. Recognized Rate of Return - Market Value Basis E1/(1/2*(B+C-(E1)))	(1.42%)	11.51%				

RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
COMPARATIVE STATEMENT

Year Ended December 31	Added to Rolls*# No.	Added to Rolls*# Annual Pensions	Removed from Rolls No.	Removed from Rolls Annual Pensions	Rolls End of Year No.	Rolls End of Year Annual Pensions	% Increase in Annual Pensions	Average Pension	Present Value of Pensions
1993	76	$ 1,156,543	35	$ 165,207	986	$ 8,342,410	13.5%	$ 8,461	$ 93,777,780
1994	105	1,765,220	38	214,407	1,052	9,893,223	18.6	9,404	102,320,216
1995	85	1,198,103	37	251,793	1,100	10,839,533	9.6	9,854	111,649,206
1996	85	1,206,860	37	255,781	1,148	11,790,612	8.8	10,271	125,424,807
1997	92	1,381,389	38	210,946	1,202	12,961,055	9.9	10,783	137,436,352
1998	87	1,320,780	45	316,133	1,244	13,965,702	7.8	11,226	147,517,689
1999	70	1,235,117	58	286,683	1,256	14,914,136	6.8	11,874	156,999,665
2000	99	1,939,366	62	405,901	1,293	16,447,601	10.3	12,720	175,045,484
2001	81	1,366,678	48	433,272	1,326	17,381,007	5.7	13,108	184,227,153
2002	133	2,859,450	61	478,315	1,398	19,762,142	13.7	14,136	212,414,152
2003	192	4,493,238	56	635,506	1,534	23,619,878	19.5	15,398	256,882,027
2004	159	3,633,350	53	481,426	1,640	26,771,802	13.3	16,324	291,780,728
2005	191	5,077,365	52	435,209	1,779	31,413,958	17.3	17,658	345,568,514
2006	258	5,814,886	49	498,726	1,988	36,730,118	16.9	18,476	406,950,639
2007	258	5,353,201	62	729,628	2,184	41,353,691	12.6	18,935	461,361,122
2008	143	2,522,444	47	509,064	2,280	43,367,071	4.9	19,021	489,123,875
2009	133	3,513,555	72	1,815,834	2,341	45,064,792	3.9	19,250	512,641,054
2010	135	2,780,334	37	398,052	2,439	47,447,074	5.3	19,453	536,040,285
2011	158	3,423,043	55	620,343	2,542	50,249,774	5.9	19,768	560,026,223
2012	115	2,308,379	66	818,819	2,591	51,739,334	3.0	19,969	570,904,476

* *Includes post-retirement increases and beneficiaries of deceased retirees.*
\# *Includes alternate payees under EDROs and members electing DROP beginning in 2004.*

RETIREES AND BENEFICIARIES DECEMBER 31, 2012
TABULATED BY ATTAINED AGE

GENERAL COUNTY

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 20			1	$ 6,649			1	$ 6,649
20 - 24					2	$ 19,025	2	19,025
25 - 29			3	33,607	1	9,710	4	43,317
30 - 34	2	$ 42,274					2	42,274
35 - 39	1	8,411			1	7,884	2	16,295
40 - 44	6	28,946			3	30,907	9	59,853
45 - 49	5	54,007			5	63,768	10	117,775
50 - 54	112	3,106,165	3	43,635	9	182,397	124	3,332,197
55 - 59	244	5,559,778	1	11,012	4	62,207	249	5,632,997
60 - 64	392	8,080,811	5	95,384	9	77,998	406	8,254,193
65 - 69	314	5,599,171	4	50,128	9	121,076	327	5,770,375
70-74	226	3,586,561	2	41,903	9	87,172	237	3,715,636
75-79	125	1,528,727	1	12,472	12	122,153	138	1,663,352
80-84	143	1,574,039	4	36,089	1	3,086	148	1,613,214
85-89	87	858,212	2	12,306	3	23,493	92	894,011
90+	45	288,922	2	7,033	3	4,945	50	300,900
Totals	**1,702**	**$30,316,024**	**28**	**$350,218**	**71**	**$815,821**	**1,801**	**$31,482,063**

RETIREES AND BENEFICIARIES DECEMBER 31, 2012
TABULATED BY ATTAINED AGE

SHERIFF'S DEPARTMENT

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
35 - 39	1	$ 39,059			1	$ 7,538	2	$ 46,597
40 - 44					1	21,135	1	21,135
45 - 49	17	767,458			3	45,977	20	813,435
50 - 54	41	2,031,945	1	$ 27,328	2	48,391	44	2,107,664
55 - 59	64	3,051,883			6	167,823	70	3,219,706
60 - 64	32	1,256,725	1	34,242	4	98,812	37	1,389,779
65 - 69	29	1,047,566			4	77,317	33	1,124,883
70 - 74	37	1,240,757			1	15,031	38	1,255,788
75 - 79	18	386,808			1	8,119	19	394,927
80 - 84	11	160,011			2	20,965	13	180,976
85 - 89	10	110,541					10	110,541
90+	3	42,436					3	42,436
Totals	**263**	**$10,135,189**	**2**	**$61,570**	**25**	**$511,108**	**290**	**$10,707,867**

RETIREES AND BENEFICIARIES DECEMBER 31, 2012
TABULATED BY ATTAINED AGE

ROAD COMMISSION

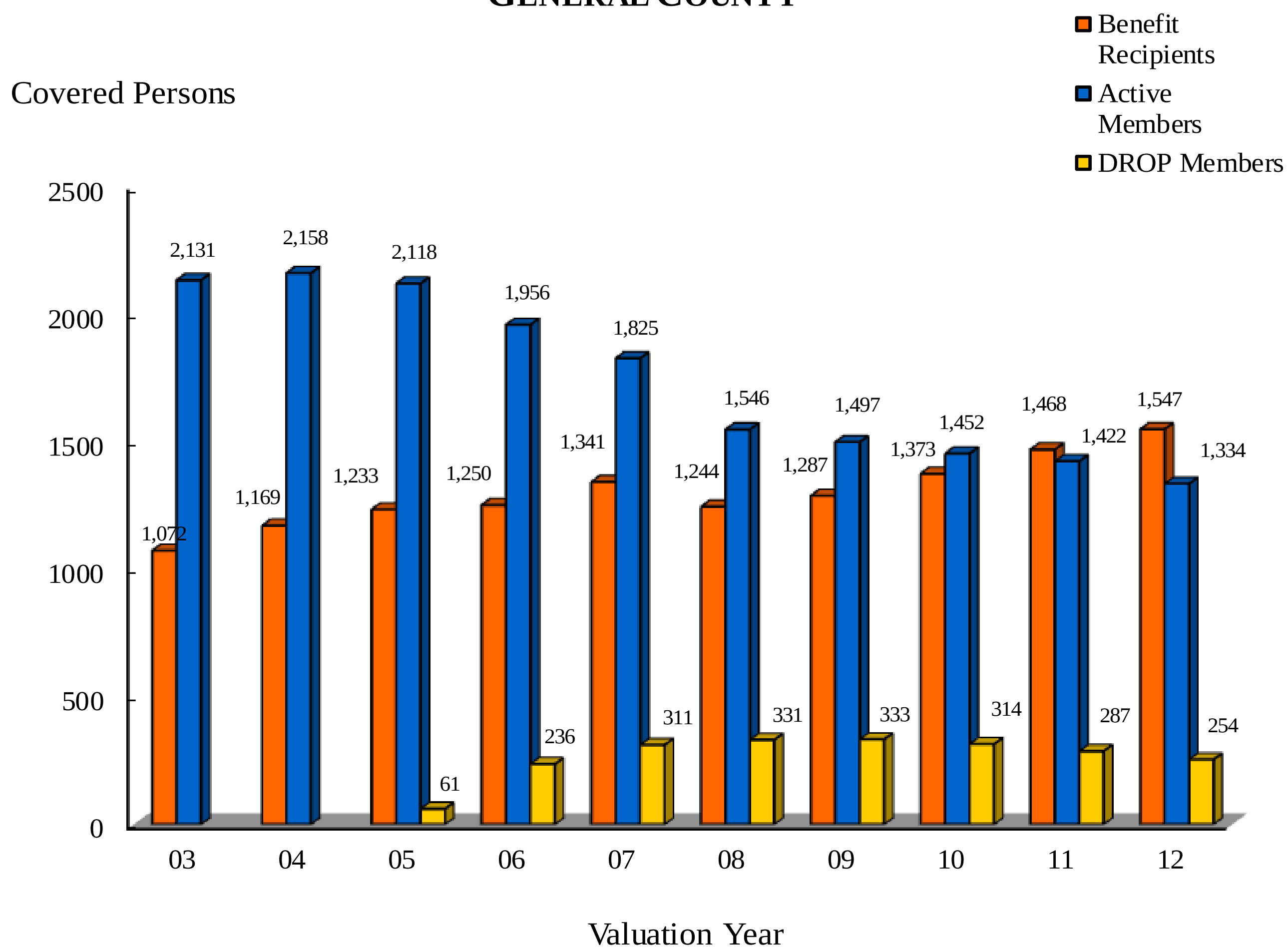
Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 20					2	$ 14,373	2	$ 14,373
20 - 24								
25 - 29					1	7,187	1	7,187
30 - 34					1	2,396	1	2,396
35 - 39					1	3,595	1	3,595
40 - 44					2	14,721	2	14,721
45 - 49	8	$ 231,331			2	37,324	10	268,655
50 - 54	26	851,584	1	$ 23,419	1	23,440	28	898,443
55 - 59	46	1,384,087	1	30,240	3	46,028	50	1,460,355
60 - 64	51	1,467,718			3	30,494	54	1,498,212
65 - 69	29	780,146			2	27,194	31	807,340
70 - 74	31	710,292	1	31,504	2	13,091	34	754,887
75 - 79	33	668,611			2	13,796	35	682,407
80 - 84	31	488,713	1	5,197	6	47,998	38	541,908
85 - 89	13	143,434			1	11,089	14	154,523
90+	15	98,800	1	6,355			16	105,155
Totals	**283**	**$6,824,716**	**5**	**$96,715**	**29**	**$292,726**	**317**	**$7,214,157**

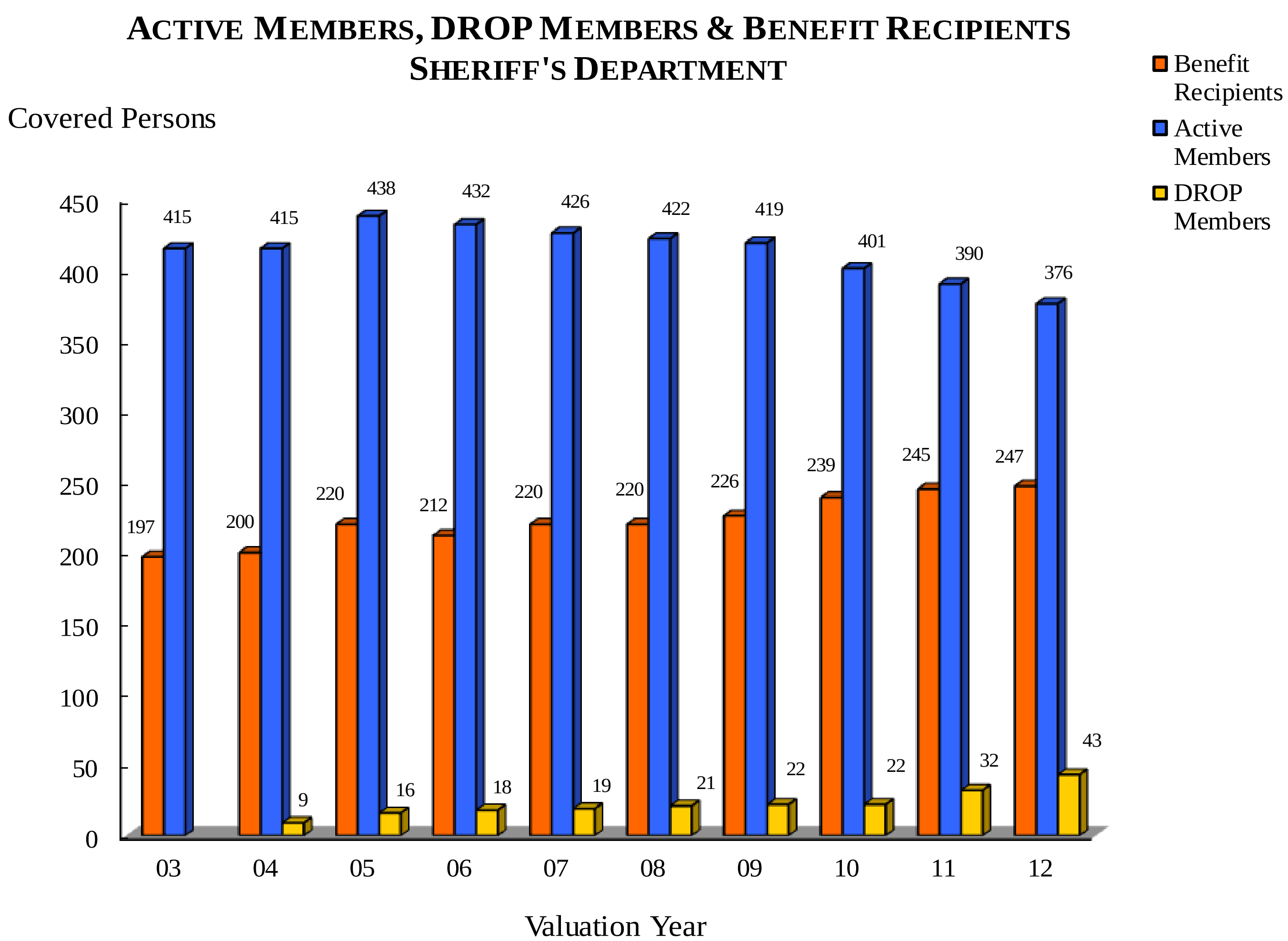
RETIREES AND BENEFICIARIES DECEMBER 31, 2012
TABULATED BY ATTAINED AGE

MARTHA T. BERRY MCF

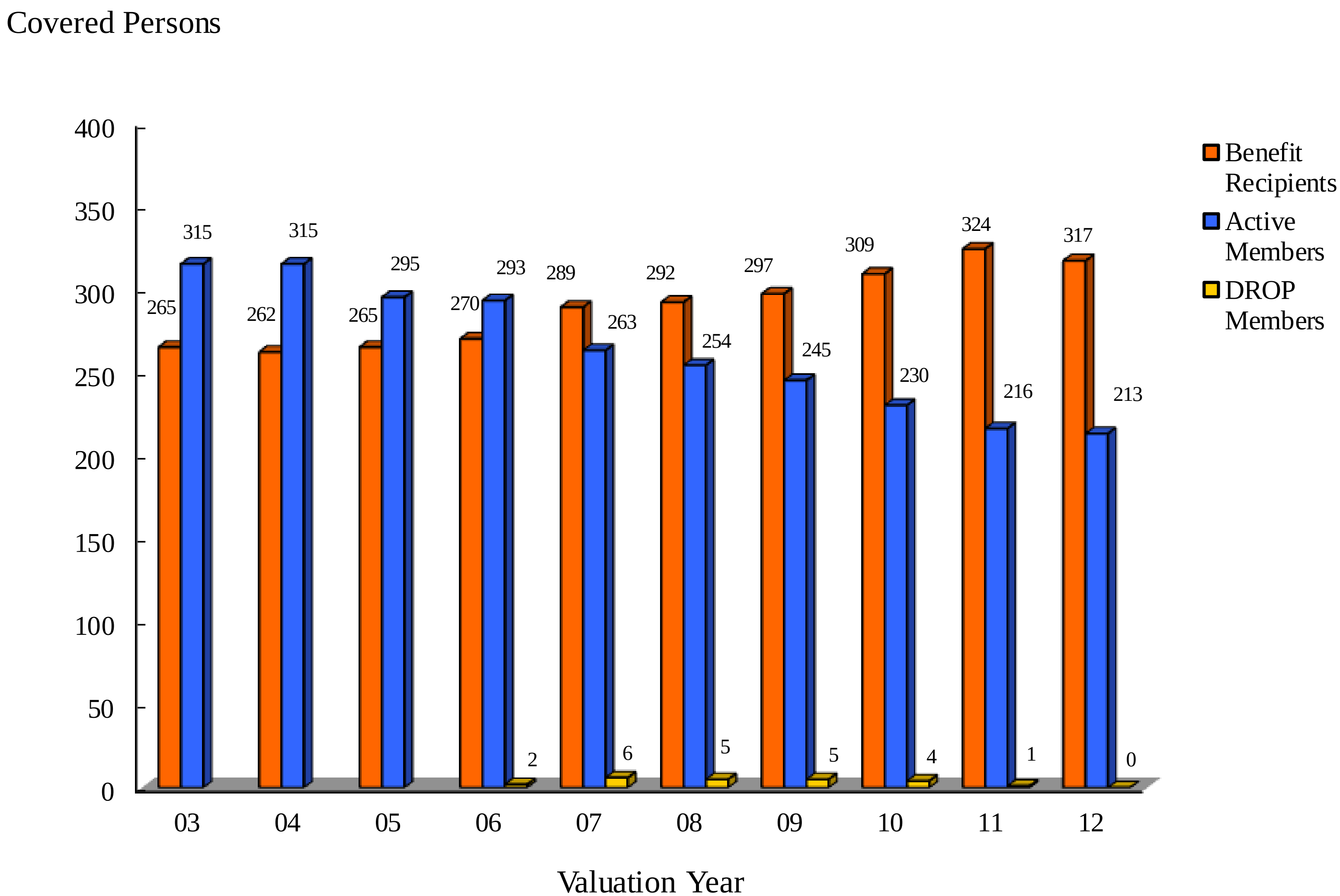
Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
35 - 39	1	$ 11,296					1	$ 11,296
40 - 44								
45 - 49			1	$ 10,350	3	$ 35,181	4	45,531
50 - 54	8	206,712			2	36,399	10	243,111
55 - 59	18	397,287			2	29,073	20	426,360
60 - 64	37	556,995					37	556,995
65 - 69	21	306,526			4	24,893	25	331,419
70 - 74	26	281,166			2	13,267	28	294,433
75 - 79	22	209,896	1	6,388	3	19,697	26	235,981
80 - 84	13	105,395			4	14,211	17	119,606
85 - 89	10	50,136					10	50,136
90 +	5	20,379					5	20,379
Totals	**161**	**$2,145,788**	**2**	**$16,738**	**20**	**$172,721**	**183**	**$2,335,247**

ACTIVE MEMBERS, DROP MEMBERS & BENEFIT RECIPIENTS
GENERAL COUNTY

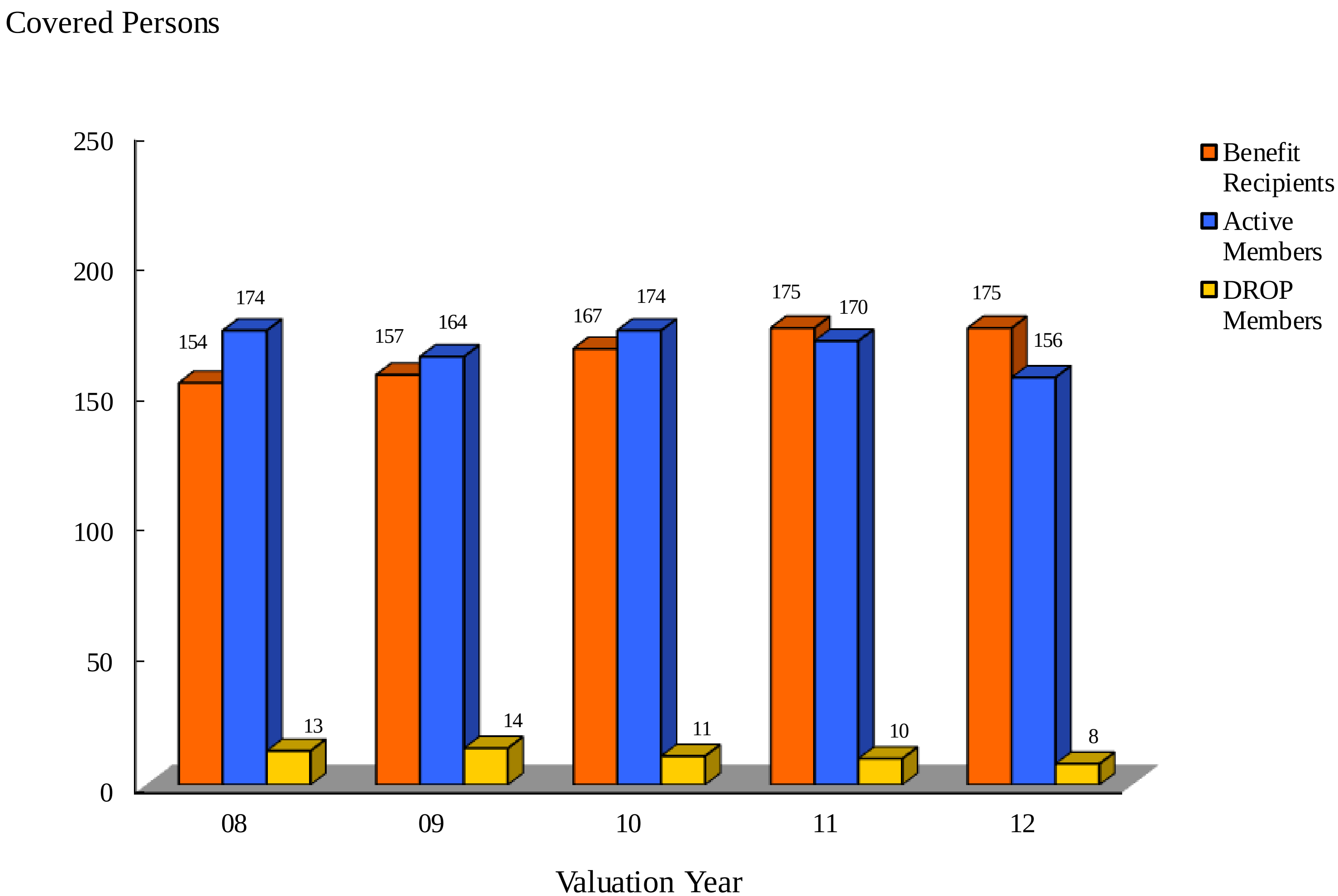



ACTIVE MEMBERS, DROP MEMBERS & BENEFIT RECIPIENTS
SHERIFF'S DEPARTMENT
Covered Persons
Benefit Recipients
Active Members
DROP Members
450
400
350
300
250
200
150
100
50
0
197
415
200
415
9
220
438
16
212
432
18
220
426
19
220
422
21
226
419
22
239
401
22
245
390
32
247
376
43
03
04
05
06
07
08
09
10
11
12
Valuation Year

ACTIVE MEMBERS, DROP MEMBERS & BENEFIT RECIPIENTS
ROAD COMMISSION



ACTIVE MEMBERS, DROP MEMBERS & BENEFIT RECIPIENTS
MARTHA T. BERRY MCF



Inactive members included in the valuation totaled 235 involving estimated deferred annual retirement allowances of $2,703,140. An inactive member is a person who has left covered employment after completing 8 or more years of service, but has not yet applied for a retirement allowance, and who has not withdrawn his accumulated contributions from the Employees' Savings Fund. Included in this group are 7 employees who are covered under the Reciprocal Retirement Act.

Inactive Members December 31, 2012
Tabulated by Valuation Divisions

Valuation Divisions	Number	Estimated Deferred
General County	180	$1,901,527
Sheriff's Department	19	362,874
Road Commission	15	180,790
Martha T. Berry MCF	21	257,949
Totals	235	$2,703,140

General County Active Members December 31, 2012
By Attained Age and Years of Service

Attained Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
15-19	1							1	$ 27,053
20-24	7							7	212,859
25-29	34	10						44	1,756,143
30-34	37	52	14					103	4,377,599
35-39	47	71	56	11				185	8,701,693
40-44	45	67	59	39	8	1		219	10,583,819
45-49	35	71	54	44	34	21		259	12,621,280
50-54	35	67	56	40	16	16	2	232	11,011,789
55-59	26	62	63	18	10	2		181	8,318,999
60	2	8	2	1	1			14	590,393
61	4	11	5			1		21	1,071,627
62	1	7	7	3				18	817,993
63		6						6	319,397
64	1	4	2	5	1	1		14	726,604
65	2	2	2	1				7	424,660
66		4						4	121,028
67		4	2	1				7	308,913
68				1				1	47,948
70	1			1				2	113,101
72	1	2			1			4	260,007
73		1						1	74,293
74	1	1						2	75,855
75	1							1	27,392
79			1					1	14,308
Totals	**281**	**450**	**323**	**165**	**71**	**42**	**2**	**1,334**	**$62,604,753**

* *Valuation Payroll excludes pay for members electing the DROP.*

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.4 years

Service: 10.3 years

Annual Pay: $46,930

SHERIFF'S DEPARTMENT ACTIVE MEMBERS DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
20-24	8							8	$ 291,022
25-29	15	12						27	1,325,070
30-34	5	23	16					44	2,634,362
35-39	3	14	50	9				76	5,014,336
40-44	3	16	25	43	10			97	6,452,654
45-49	2	7	15	16	35	2		77	5,225,472
50-54		6	7	4	17	1		35	2,427,109
55-59		2		1	7			10	711,276
60				1	1			2	165,039
Totals	**36**	**80**	**113**	**74**	**70**	**3**		**376**	**$24,246,340**

* *Valuation Payroll excludes pay for members electing the DROP.*

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 40.8 years

Service: 13.3 years

Annual Pay: $64,485

ROAD COMMISSION ACTIVE MEMBERS DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
25-29	2	3						5	$ 258,895
30-34	1	8	12	1				22	1,147,812
35-39	1	11	14	7				33	1,942,742
40-44	2	5	11	19	8	1		46	2,749,090
45-49		6	10	9	15	10		50	3,025,185
50-54	2	2	11	11	3	4		33	1,946,337
55-59		4	5	4	1			14	761,974
60		2	1	3				6	370,054
62			1					1	44,426
64			1	1				2	136,264
73					1			1	41,182
Totals	**8**	**41**	**66**	**55**	**28**	**15**		**213**	**$12,423,961**

* *Valuation Payroll excludes pay for members electing the DROP.*

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 44.5 years

Service: 14.9 years

Annual Pay: $58,328

MARTHA T. BERRY MCF ACTIVE MEMBERS DECEMBER 31, 2012
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service on Valuation Date							Totals No.	Totals Valuation Payroll*
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll*
20-24	5							5	$ 158,137
25-29	7							7	235,533
30-34	17	7						24	950,306
35-39	12	6	1					19	758,547
40-44	20	9	3	4	2			38	1,569,853
45-49	5	3	4	5	2	1		20	683,596
50-54	5	4	1	5		1		16	618,347
55-59	7	6	6	1				20	812,895
60		2						2	119,870
61	1							1	29,090
62		1						1	46,464
63	1							1	55,587
65		1						1	37,586
67		1						1	41,009
Totals	**80**	**40**	**15**	**15**	**4**	**2**		**156**	**$6,116,820**

* *Valuation Payroll excludes pay for members electing the DROP.*

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 43.1 years

Service: 6.7 years

Annual Pay: $39,210

SECTION D

ACTUARIAL COST METHODS AND ACTUARIAL ASSUMPTIONS

VALUATION METHODS

Actuarial Cost Method: Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

(i) the annual normal costs for each individual active member, payable from the date of hire to the date of retirement, are sufficient to accumulate to the value of the member's benefits.

(ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Amortization of Unfunded Actuarial Valuation Method: Unfunded actuarial accrued liabilities or asset surpluses were amortized by level percent-of-payroll contributions (principal and interest combined) over 20 years. These periods are re-established with each annual actuarial valuation. The amortization method was first adopted for the December 31, 2005 actuarial valuation. Active member payroll was assumed to increase 5.0% for the purpose of determining the level-percent contributions.

Asset Valuation Method: The actuarial value equals:

(a) Actuarial value of assets from the previous valuation, plus
(b) employer and member contributions since the last valuation, minus
(c) benefit payments and refunds since the last valuation, plus
(d) estimated investment income at the assumed investment return, plus
(e) portion of gain (loss) recognized in the current valuation.

For the above purpose, gain (loss) is defined as the excess during the period of the investment return on the market value of assets over the expected investment income. Twenty percent of the difference is recognized over a 5-year period in the actuarial value of assets.

This method was first adopted for the December 31, 2005 actuarial valuation.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

Investment Return (net of investment expenses).

2.5% per year in excess of pay inflation (real rate of return). If pay inflation matches the assumption of 5.0%, this implies a 7.5% rate of return.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 1993 valuation. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below. Actual increases in average active member pay are also shown for comparative purposes.

	Year Ended December 31					5-Year
	2012	2011	2010	2009	2008	Average*
Rate of Investment Return	0.1 %	0.1 %	3.3 %	3.5 %	2.5 %	1.9 %
Increase in Average Pay	2.3	0.9	(2.1)	(1.4)	0.9	0.1
Real Rate of Return	(2.2)	(0.8)	5.4	4.9	1.6	1.8

* *Compound rate of increase.*

The nominal rate of return was computed using the approximate formula i = I divided by 1/2 (A + B - I), where I is actual investment income net of expenses, A is the beginning of year asset value, and B is the end of year asset value.

These rates of return should not be used for measurement of an investment advisor's performance or for comparison with other systems.

Pay Projections. These assumptions are used to project current pays to those upon which benefits will be based. The assumptions were first used for the December 31, 2005 valuation.

	Annual Rate of Pay Increase								
		Merit and Longevity				Total			
Years of Service	Base (Economic)	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
1	5.0%	3.0 %	7.0 %	6.0 %	3.0 %	8.0%	12.0%	11.0%	8.0%
2	5.0	3.0	7.0	6.0	3.0	8.0	12.0	11.0	8.0
3	5.0	3.0	7.0	6.0	3.0	8.0	12.0	11.0	8.0
4	5.0	3.0	4.0	6.0	3.0	8.0	9.0	11.0	8.0
5	5.0	3.0	4.0	6.0	3.0	8.0	9.0	11.0	8.0
6	5.0	3.0	4.0	6.0	3.0	8.0	9.0	11.0	8.0
7	5.0	1.0	4.0	2.0	1.0	6.0	9.0	7.0	6.0
8	5.0	1.0	1.0	2.0	1.0	6.0	6.0	7.0	6.0
9	5.0	1.0	1.0	2.0	1.0	6.0	6.0	7.0	6.0
10	5.0	1.0	1.0	2.0	1.0	6.0	6.0	7.0	6.0
11+	5.0	1.0	1.0	1.0	1.0	6.0	6.0	6.0	6.0

The mortality table (a risk assumption) used was the RP 2000 Mortality Table, adjusted for projected mortality improvements to 2015 with no setbacks for males or females. This table was first used for the December 31, 2005 valuation. The membership size in the plan is not sufficiently large to determine if there is a margin for mortality improvement. However, based on our experience with a broad cross section of plans similar in nature to this plan it is our opinion that there is a provision for future mortality improvement in the current mortality assumption. Sample values follow:

	Single Life Retirement Values			
	Values at Retirement of $1 Monthly for Life		**Future Life Expectancy (years)**	
Sample Ages	**Men**	**Women**	**Men**	**Women**
50	$144.50	$146.68	32.29	34.38
55	136.81	139.67	27.59	29.64
60	126.95	130.80	23.05	25.08
65	115.04	120.11	18.79	20.80
70	101.33	107.82	14.89	16.86
75	85.49	93.96	11.34	13.29
80	68.54	78.58	8.25	10.09

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each pension payment being made after retirement.

The table above was set forward 4 years for males and females for the purpose of valuing disabled lives.

Rates of disability were as follows:

Sample Ages	**% of Active Members Becoming Disabled within Next Year**
25	0.09 %
30	0.11
35	0.15
40	0.22
45	0.36
50	0.61
55	1.01
60	1.66

The rates of retirement (a risk assumption) used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	General County	Sheriff's Department	Road Commission	Martha T. Berry MCF
50	15 %			15 %
51	15			15
52	15			15
53	15			15
54	15			15
55	15		25 %	15
56	15		25	15
57	15		25	15
58	15		25	15
59	25		25	25
60	25	25 %	25	25
61	25	25	30	25
62	25	25	30	25
63	25	25	30	25
64	25	25	30	25
65	25	100	100	25
66	25			25
67	25			25
68	25			25
69	25			25
70 & Up	100			100

Retirement Service	Sheriff's Department
25	50 %
26	40
27	40
28	40
29	40
30	40
31	35
32	25
33	25
34	25
35 & Up	100

These tables were first used for the December 31, 2005 valuation.

For all General County and Martha T. Berry MCF members hired on or after January 1, 2002 the following retirement probabilities will apply:

Retirement Ages	General County	Martha T. Berry MCF
55	10 %	10 %
56	10	10
57	10	10
58	10	10
59	20	20
60	20	20
61	20	20
62	25	25
63	25	25
64	25	25
65	25	25
66	25	25
67	25	25
68	25	25
69	25	25
70 & Up	100	100

Rates of separation from active membership (a risk assumption) were as follows: (rates do not apply to members eligible for regular retirement and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Rates of Separation from Active Employment Before Retirement, Death or Disability

		% of Active Members Separating within Next Year			
Sample Ages	**Years of Service**	**General County**	**Sheriff's Department**	**Road Commission**	**Martha T. Berry MCF**
ALL	0	12.00 %	4.00 %	6.50 %	12.00 %
	1	9.00	4.00	6.00	9.00
	2	8.00	3.00	5.50	8.00
	3	6.00	3.00	5.00	6.00
	4	6.00	3.00	4.50	6.00
25	5 & Over	5.80	1.60	2.50	5.80
30		5.30	1.10	2.00	5.30
35		4.30	1.00	2.00	4.30
40		3.30	0.75	1.50	3.30
45		2.30	0.50	1.00	2.30
50		1.80	0.25	0.50	1.80
55		1.75	0.25	0.50	1.75
60		1.50	0.25	0.50	1.50

These tables were first used for the December 31, 2005 valuation.

Effect of lump sum payments on FAC: 4.5% for General County and Martha T. Berry MCF members.

11.0% for Command Officer and Inspectors hired before 12/1/96; 1% for other CBU members.

6.0% for Road Commission members.

Administrative expense load: 0.10% of payroll

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption: 100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.

Pay Increase Timing: Six months after the valuation date.

Decrement Timing: Decrements of all other types are assumed to occur mid-year.

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

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

Decrement Relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation: Disability and death-in-service decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.

Normal Form of Benefit: The assumed normal form of benefit is the straight life form.

Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

GLOSSARY

***Actuarial Accrued Liability* -** The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

***Accrued Service* -** The service credited under the plan which was rendered before the date of the actuarial valuation.

***Actuarial Assumptions* -** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

***Actuarial Cost Method* -** A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

***Actuarial Equivalent* -** A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

***Actuarial Present Value* -** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest and taking into account the probability of payment.

***Amortization* -** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

***Experience Gain (Loss)* -** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

***Normal Cost* -** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

***Plan Termination Liability* -** The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

***Reserve Account* -** An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

***Unfunded Actuarial Accrued Liability* -** The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

***Valuation Assets* -** The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.

SECTION E

DISCLOSURE MATERIAL IN CONFORMANCE WITH STATEMENT NO. 25 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Ratio (a)/(b)	Covered Payroll** (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)
12/31/03 #*	$674,575,807	$624,212,027	$(50,363,780)	108.1	$ 127,235,644	(39.6) %
12/31/04 *	674,857,869	664,487,155	(10,370,714)	101.6	134,258,243	(7.7)
12/31/05 #	719,336,871	682,144,687	(37,192,184)	105.5	134,886,588	(27.6)
12/31/06	781,450,248	721,657,669	(59,792,579)	108.3	128,820,986	(46.4)
12/31/07	847,305,155	772,649,767	(74,655,387)	109.7	126,696,252	(58.9)
12/31/08 #*	855,265,571	805,888,089	(49,377,481)	106.1	121,822,674	(40.5)
12/31/09 *	866,356,598	814,563,728	(51,792,870)	106.4	116,522,938	(44.4)
12/31/10 *	862,915,501	837,167,835	(25,747,666)	103.1	110,795,240	(23.2)
12/31/11	828,692,442	854,323,946	25,631,504	97.0	108,900,180	23.5
12/31/12 *	795,605,544	867,218,699	71,613,155	91.7	105,391,874	67.9

* *Plan amended.*
** *Excludes pay for members electing DROP.*
\# *Certain assumptions or methods revised.*

Actuarial Cost Method	Individual Entry Age Normal Cost
Asset Valuation Method	Market value with 5-year smoothing of gains and losses
Principal Actuarial Assumptions (last revised for the 12/93 special valuation):	
- Net Investment Return	7.5%
- Projected Salary Increases	5.0% base pay increase plus merit and longevity
- Cost-of-Living Adjustments	None

This information is presented in draft form for review by the County's auditor. Please let us know if there are any changes so that we may maintain consistency with the County's financial statements.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Valuation Year Ended December 31	Fiscal Year Ended December 31	Annual Required Contribution
2003	2005	$ 14,848,710
2004	2006	20,215,000
2005	2007	19,121,329
2006	2008	18,658,076
2007	2009	18,507,521
2008	2010	15,170,777
2009	2011	16,050,489
2010	2012	16,604,841
2011	2013	19,932,742
2012	2014	22,152,820

Actuarial Cost Method	Individual Entry Age Normal Cost
Amortization Method	Level percent of payroll over a 20-year open period
Asset Valuation Method	Market value with 5-year smoothing of gains and losses
Principal Actuarial Assumptions (last revised for the 12/93 special valuation):	
- Net Investment Return*	7.5%
- Projected Salary Increases*	5.0% base pay increase plus merit and longevity
- Cost-of-Living Adjustments	None

* *Includes pay inflation at 5.0%.*

APPENDIX

SUMMARY OF BENEFIT PROVISIONS

Benefit Provision Summary as of December 31, 2012 for General Employees

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility (age/service)	Retirement Benefit: Multiplier	Retirement Benefit: Employer Maximum	FAC Period	Employee Contribution
0	General Non Union	Hired on or before 12/31/01 or vested by 2/26/09	8 years	No	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	No	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
2	UAW Animal Shelter	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
3	AFSCME Local 411	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
6	Macomb County Environmental Health Association	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4% / 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
8	Teamsters 214 Court Reporters	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
9	International Union of Operating Engineers (Boiler Operators)	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
10	TPOAM Circuit Court Officers	Hired on or before 12/31/01 or vested by 7/24/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
11	MNA Unit I Health Dept.	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
12	UAW Local 412 Unit 49 Information Technology	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
13	UAW Local 889 Specialized Offices	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
15	Building Trades Association	Hired on or before 12/31/01 or vested by 5/1/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%

** Must be vested on 12/31/2012, otherwise not eligible for DROP*

Benefit Provision Summary as of December 31, 2012 for General Employees

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility: Eligibility (age/service)	Retirement Benefit: Multiplier	Retirement Benefit: Employer Maximum	FAC Period	Employee Contribution
16	UAW Local 412 Unit 46 Assistant Prosecutors	Hired on or before 12/31/01 or vested by 9/14/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
18	Teamsters Local 214 FOC/Circuit Court	Hired on or before 12/31/01 or vested by 7/24/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
19	General	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
21	POAM JJC	Hired on or before 12/31/01 or vested by 5/1//09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
24	UAW Local 889 MCCSA	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
25	UAW Local 412 Unit 75 Supervisors	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
27	TPOAM Macomb Co. Senior Service Employees Association	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
28	TPOAM Juvenile Court & Justice Center Employees	Hired on or before 12/31/01 or vested by 5/1//09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
30	UAW Local 412 Unit 95 Assistant Corporation Counsel	Hired on or before 12/31/01 or vested by 2/27/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
43	UAW Local 889 Probate Court/ Corporation Counsel	Hired on or before 12/31/01 or vested by 6/19/09	8 years	Yes*	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	Yes*	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%
44	UAW Local 412 - Unit 98 MCCSA Professionals	Hired on or before 12/31/01 or vested by 2/26/09	8 years	No #	60/8, Rule of 70 (min age 50)	2.4%/ 1% (26 yrs)	65% of FAC	4 years	3.5%
		Hired on/after 1/1/2002 & before 1/1/2012	8 years	No	55/25, 60/8	2.20%	66% of FAC	5 years	2.5%
		Hired on/after 1/1/2012	15 years	No	55/25, 60/15	2.20%	66% of FAC	5 years	2.5%

** Must be vested on 12/31/2012, otherwise not eligible for DROP*

 # DROP will remain in place for existing employees currently enrolled. No new entries into the DROP shall be allowed.

Benefit Provision Summary as of December 31, 2012 for the Sheriff's Department

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility: Eligibility (age/service)	Retirement Benefit: Multiplier	Retirement Benefit: Employer Maximum	FAC Period	Member Contribution
		Hired before 8/20/2010	8 years	Yes	60/8, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%
1	POLC- Command	Hired on/after 8/20/2010	15 years	Yes	60/15, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%
7	POAM Deputies	Hired before 08/06/2010	8 years	Yes*	60/8, 25 & out	2.64% for 25 yrs	66% of FAC	3 years	4%
		Hired or promoted on/after 08/06/2010	15 years	Yes*	60/15, 25 & out	2.64% for 25 yrs	66% of FAC	3 years	4%
	POAM Dispatchers	Hired before 08/06/2010	8 years	Yes*	60/8, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%
		Hired or promoted on/after 08/06/2010	15 years	Yes*	60/15, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%
		Hired before 12/18/2009	8 years	Yes	60/8, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%
20	POLC Captains	Promoted or Hired on/after 12/18/2009	15 years	Yes	60/15, 25 & out	2.4%(26 yrs) / 1%	65% of FAC	3 years	4%
26	Deputies (Corrections)	All employees	8 years	Yes	60/8, 25 & out	2.4%(26 yrs) / 1%	66% of FAC	3 years	4%

** Must be vested on 12/31/2012, otherwise not eligible for DROP*

 # FAC will NOT include payment for banked sick leave time if individual is hired on or after 11/1/1996

@ FAC will NOT include payment for banked sick leave time if individual is hired on or after 12/19/1996

Benefit Provision Summary as of December 31, 2012 for Road Commission Employees

Division Code	Division Name	Benefit Tier	Service Needed to Vest	DROP Eligible?	Retirement Eligibility Eligibility (age/service)	Retirement Benefit Multiplier	Retirement Benefit Employer Maximum	FAC Period	Member Contributions
31	Road Commission Non Union		8 years	No	55/25, 60/8	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
32	Road Commission ADTECH	Hired before 10/19/2011	8 years	No	60/8, Rule of 70 (min age 55)	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired on/after 10/19/2011	8 years	No	55/25, 60/8	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
33	Road Commission AFSCME Local 893	Hired before 6/15/2010	8 years	No	Rule of 70 (min age 55)	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%
		Hired on/after 6/15/2010	8 years	No	55/25, 65/8	2.4% / 1% (26 yrs)	65% of FAC	3 years	3.5%

Appendix B: December 31, 2013 Supplemental Actuarial Valuation for Macomb County Retiree Health Care Plan

Gabriel Roeder Smith & Company
Consultants & Actuaries

MACOMB COUNTY RETIREE HEALTH CARE PLAN

SUPPLEMENTAL ACTUARIAL VALUATION

AS OF DECEMBER 31, 2013

TABLE OF CONTENTS

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

One Towne Square
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August 21, 2014

Mr. Peter Provenzano
Finance Director
Macomb County

Dear Mr. Provenzano:

Submitted in this report are the results of an actuarial valuation of the assets and liabilities associated with the employer financed retiree health plan benefits provided by Macomb County. The date of the valuation was December 31, 2013. The annual required contributions have been calculated for the fiscal year beginning January 1, 2014.

This report was prepared at the request of Macomb County and is intended for use by the County and those designated or approved by the County. This report may be provided to parties other than the County only in its entirety and only with the permission of the County.

The purpose of the valuation was to measure the liabilities of the Retiree Health Plan based on a proposed County funding policy that includes employer contributions to a qualified OPEB trust equal to 100% of the actuarially determined rate. This report should not be relied on for any other purpose. Determinations of the liability associated with plan benefits described in this report for purposes other than satisfying the stated objective may be significantly different than the values shown 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.

The valuation was based upon information furnished by the County, concerning retiree health benefits, financial transactions, plan provisions, active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency with data provided for the last valuation, but did not otherwise audit the data. As a result, we are unable to assume responsibility for the accuracy or completeness of the information provided by the County.

Mr. Peter Provenzano
August 21, 2014
Page 2

To the best of our knowledge the information contained in this report is accurate and fairly represents the actuarial position of the Macomb County Retiree Health Care Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Louise Gates and Jim Anderson are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

Louise Gates

Louise Gates, ASA, MAAA

James D. Anderson

James D. Anderson, FSA, EA, MAAA

LMG/MB:mrb

SECTION A

VALUATION RESULTS

BACKGROUND

The County provides retiree health benefits to eligible County retirees (and their eligible beneficiaries) for their lifetimes. The County began funding retiree health benefits approximately 20 years ago by making contributions in excess of current benefit payments to a retiree health care trust. In recent years, County contributions have been sufficient to pay only for the current year's benefit disbursements (a.k.a., pay-as-you-go funding). Based on this practice, recent valuations of the Retiree Health Care Plan have been based on a relatively low discount rate.

The County is currently exploring the idea of issuing obligation bonds in connection with the County's Retiree Health Care Plan liability. This report includes a valuation of Plan liabilities assuming a change in the County's funding policy. Namely, that the County will issue bonds and use the proceeds to make 100% of the actuarially determined Plan contributions. As a result, the discount rate used in this valuation of the Retiree Health Care Plan is 7.50% per year. A detailed description of the assumptions and methods used in this valuation of the Plan is included in Section D of this report.

Section A of this report contains key valuation results including County contributions for fiscal 2014 based on the current asset valuation method (market value of assets). We understand that the retiree health plan will be closed to new County employees hired on or after January 1, 2016. New County employees will receive retiree health benefits from a defined contribution type retiree health plan. These prospective County employees will not become members of this plan. As a result of this change and consistent with current accounting standards, County contributions to this plan are expected to increase beginning in 2016 due to a change in amortization method (level dollar instead of level percent of pay). If the effective date of plan closure was January 1, 2014, the recommended fiscal year 2014 County contribution would be approximately $29 million instead of the amount shown on page A-2.

COUNTY CONTRIBUTIONS TO PROVIDE BENEFITS FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2014

Contributions for	7.5% Interest Rate
A. Normal Cost of Benefits	$ 8,203,337
B. Unfunded Accrued Liability (UAL)	262,636,883
C. Unfunded Accrued Liability Payment	14,080,058
D. Employer Contribution (A+C)	22,283,395

The Annual Required Contribution (ARC) shown above was developed based on the reported market value of the Retiree Health Care Plan trust assets as of December 31, 2013. The UAL was financed over 30 years using a level percent of pay amortization method to determine County contribution requirements for 2014.

The long term rate of investment return used in this valuation of the Plan is 7.50%. The following page shows the unfunded accrued liabilities as of December 31, 2013.

DETERMINATION OF THE UNFUNDED ACCRUED LIABILITY AS OF DECEMBER 31, 2013

A. Accrued Liability	
1. For retirees and beneficiaries	$ 276,726,129
2. For vested terminated members	33,819,802
3. For present active members	107,236,686
4. Total	417,782,617
B. Market Value of Assets	
1. Total	$ 155,145,734
C. Unfunded Accrued Liability (UAL): (A.4) – (B.1)	$ 262,636,883
D. Funded Percent: (B.1) / (A.4)	37.1%

The chart above shows the development of the Plan's unfunded actuarial accrued liabilities based on the market value of assets held in the Retiree Health Care Plan trust. As of December 31, 2013, the Plan's accrued liabilities exceed the market value of assets by $262.6 million.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Premium rates for the Macomb County Retiree Health Care Plan were developed separately for the self-insured and the fully-insured portions and then combined to create one set of premium rates.

The self-insured initial premium rates were developed separately for pre-65 retirees. The rates were calculated by using paid claims experience and exposure data for the period of January 2011 to December 2013 adjusted for catastrophic claims, plus the load for administration, network access fee, and stop loss premiums. The self-insured Medical and prescription drug data were provided by the County. Since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well.

The fully-insured initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The fully-insured rates provided by the County were utilized to determine the appropriate premium rates. The pre-65 fully-insured premiums for current retirees in the BCN suffixes are assumed to be unblended rates based on the experience of pre-65 retired members; therefore, the fully-insured premium rate is used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of the pre-65 retiree group.

For the post-65 retirees, the fully-insured Medicare Advantage premium rate is used as the basis of the initial per capita cost since the rate reflects the demographics of the post-65 retiree group. In a Medicare Advantage program, the OPEB liability is based on the difference between the present value of future claims less the present value of future Medicare reimbursements. The law provides for reductions to the reimbursement amounts that would be provided to Medicare Advantage plans starting in 2011. GASB does not permit recognition of future plan changes in a valuation, so the net claims growth assumption will be based on the current plan design. Due to the uncertainty in the future design of the Medicare Advantage program, a load (12.4%) is added implicitly assuming total claims will experience higher trends than reimbursements in the short term.

RETIREE PREMIUM RATE DEVELOPMENT

For the current active employees who retire after November 1, 2013, retiree coverage floats with active coverage. The pre-65 fully-insured premiums for these members were identified as blended rates for BCN based on the combined experience of active and pre-65 retired members; therefore, there is an implicit employer subsidy for the non-Medicare eligible retirees since the average costs of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees. The true per capita cost for the pre-65 retirees is developed by adjusting the demographic differences between the active employees and retirees to reflect this implicit rate subsidy for the retirees (we estimated this subsidy to be 41% based on the age/sex distribution of the group). The HAP rates were assumed to be unblended rates based on the experience of pre-65 retired members. We have developed separate premium rates for future retirees in order to reflect the benefit differences.

Age graded and sex distinct premiums are utilized in this valuation. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each specific age/sex combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

Michigan Claims Tax Assessment fees along with Federal taxes and fees established by the Affordable Care Act have been included in the rates we developed.

The tables on the following page show the combined self-insured and fully-insured medical and prescription drug one-person monthly premiums at select ages. The premium (or per capita costs) rates shown below reflect the use of age grading.

RETIREE PREMIUM RATE DEVELOPMENT

Current Retiree Rates

Retirements prior to 11/1/2013 and All POAM and POLC Retirees

Premiums For Retirees Not Eligible For Medicare

Age	Males	Females
50	$527.91	$598.15
55	689.97	709.22
60	866.79	833.18

Premiums For Retirees Eligible For Medicare

Age	Males	Females
70	$396.70	$356.72
75	440.41	390.85
80	472.21	416.24

Future Retiree Rates

Retirements after 11/1/2013

Premiums For Retirees Not Eligible For Medicare

Age	Males	Females
50	$442.20	$501.04
55	577.94	594.07
60	726.06	697.91

Premiums For Retirees Eligible For Medicare

Age	Males	Females
70	$396.70	$356.72
75	440.41	390.85
80	472.21	416.24

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.

James E. Pranschke

James E. Pranschke, FSA, MAAA

SECTION C

VALUATION DATA

SUMMARY OF REPORTED FINANCIAL INFORMATION
YEAR ENDED DECEMBER 31, 2013
(MARKET VALUE)

	RETIREE HEALTH CARE TRUST ASSETS
Market Value on December 31, 2012	$ 130,289,669
Revenues:	
a. Employer Contributions	15,080,087
b. Investment Earnings	9,649,834
c. Investment Appreciation	14,446,003
d. Member Contributions	746,131
e. Other	0
f. Total	39,922,055
Disbursements:	
a. Health Care Premiums	15,014,303
b. Administrative Expenses	51,687
c. Total	15,065,990
Market Value on December 31, 2013	$ 155,145,734

SUMMARY OF RETIREE HEALTH PLAN MEMBERS BY EMPLOYMENT GROUP AS OF DECEMBER 31, 2013

Active Members

General County Employees	
Number	1,328
Average Age	45.7 years
Average Service	9.5 years
Sheriff Department	
Number	377
Average Age	40.1 years
Average Service	12.4 years
Martha T. Berry MCF	
Number	92
Average Age	43.2 years
Average Service	9.4 years
Total	
Number	1,797
Average Age	44.4 years
Average Service	10.1 years

DROP Members

General County Employees	
Number	297
Average Age	58.8 years
Average Service at DROP	19.0 years
Sheriff Department	
Number	54
Average Age	52.5 years
Average Service at DROP	25.3 years
Martha T. Berry MCF	
Number	8
Average Age	58.8 years
Average Service at DROP	18.0 years
Total	
Number	359
Average Age	57.8 years
Average Service at DROP	19.9 years

SUMMARY OF RETIREE HEALTH PLAN MEMBERS AS OF DECEMBER 31, 2013

Retirees and Beneficiaries (Current Benefit Recipients)

Recipient Age	Number of Contracts*
35 - 39	2
40 - 44	4
45 - 49	15
50 - 54	84
55 - 59	216
60 - 64	384
65 - 69	362
70 - 74	304
75 - 79	187
80 - 84	148
85 - 89	105
90 & Over	55
Totals	**1,866**

** Includes 127 retirees who receive the $1,500 annual bonus in lieu of County paid retiree health. Excludes members with no retiree health coverage.*

Vested Terminated Employees (Future Benefit Recipients)

Age	Number of Contracts
30-34	2
35-39	11
40-44	21
45-49	45
50-54	70
55-59	59
60	11
61	1
62	2
Totals	**222**

SECTION D

VALUATION METHODS AND ACTUARIAL ASSUMPTIONS

ACTUARIAL METHODS AND ASSUMPTIONS USED FOR THE VALUATION

The individual entry age actuarial cost method of valuation was used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce payments (principal & interest) which are level percent of payroll contributions.

The actuarial assumptions used in the valuation are shown in this Section.

The **discount rate** assumed in the valuations was 7.50% per year, compounded annually (net after expenses).

The **wage inflation rate** assumed in this valuation was 4.00% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority.

The Active Member Population is assumed to decline for all employment groups in connection with the recent change that closes the Plan to new County employees in the near term.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

The **salary increase assumption** used in this actuarial valuation projects annual salary increases of 4.0% plus a percentage based on an age-related scale to reflect merit, longevity and promotional salary increases.

	Annual Rate of Pay Increase						
		Merit and Longevity			Total		
Years of Service	Base (Economic)	General County	Sheriff's Department	Martha T. Berry MCF	General County	Sheriff's Department	Martha T. Berry MCF
1	4.0%	3.0 %	7.0 %	3.0 %	7.0%	11.0%	7.0%
2	4.0	3.0	7.0	3.0	7.0	11.0	7.0
3	4.0	3.0	7.0	3.0	7.0	11.0	7.0
4	4.0	3.0	4.0	3.0	7.0	8.0	7.0
5	4.0	3.0	4.0	3.0	7.0	8.0	7.0
6	4.0	3.0	4.0	3.0	7.0	8.0	7.0
7	4.0	1.0	4.0	1.0	5.0	8.0	5.0
8	4.0	1.0	1.0	1.0	5.0	5.0	5.0
9	4.0	1.0	1.0	1.0	5.0	5.0	5.0
10	4.0	1.0	1.0	1.0	5.0	5.0	5.0
11+	4.0	1.0	1.0	1.0	5.0	5.0	5.0

Pay Projections. This assumption is used to project current pays to those upon which future contributions will be based.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

The **mortality table** used was the RP 2000 Mortality Table, adjusted for projected mortality improvements to 2015 with no setbacks for males or females. For disabled retirees, the regular mortality table is used with a 4-year set forward in ages to reflect the higher expected mortality rates of disabled members.

Projected life expectancies and mortality rates for non-disabled members are shown below for selected ages:

	Single Life Retirement Values			
	Values at Retirement of $1 Monthly for Life		Future Life Expectancy (years)	
Sample Ages	Men	Women	Men	Women
50	$144.50	$146.68	32.29	34.38
55	136.81	139.67	27.59	29.64
60	126.95	130.80	23.05	25.08
65	115.04	120.11	18.79	20.80
70	101.33	107.82	14.89	16.86
75	85.49	93.96	11.34	13.29
80	68.54	78.58	8.25	10.09

This assumption is used to measure the probabilities of employees dying before retirement and the probabilities of each health insurance premium being paid after retirement.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

A schedule of **retirement rates** is used to measure the probability of eligible members retiring during the next year. The uniform retirement rates in use for each category are shown below:

Retirement Ages	General County	Sheriff's Department	Martha T. Berry MCF	Retirement Service	Sheriff's Department
50	15 %		15 %	25	50 %
51	15		15	26	40
52	15		15	27	40
53	15		15	28	40
54	15		15	29	40
55	15		15	30	40
56	15		15	31	35
57	15		15	32	25
58	15		15	33	25
59	25		25	34	25
60	25	25 %	25	35 & Up	100
61	25	25	25		
62	25	25	25		
63	25	25	25		
64	25	25	25		
65	25	100	25		
66	25		25		
67	25		25		
68	25		25		
69	25		25		
70 & Up	100		100		

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

For all General County and Martha T. Berry MCF members hired on or after January 1, 2002 the following retirement probabilities will apply:

Retirement Ages	General County	Martha T. Berry MCF
55	10 %	10 %
56	10	10
57	10	10
58	10	10
59	20	20
60	20	20
61	20	20
62	25	25
63	25	25
64	25	25
65	25	25
66	25	25
67	25	25
68	25	25
69	25	25
70 & Up	100	100

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

Disability rates are used in the valuation to estimate the incidence of disability in future years.

The assumed rates of disablement at various ages are shown below:

Sample Ages	% of Active Members Becoming Disabled within Next Year
25	0.09 %
30	0.11
35	0.15
40	0.22
45	0.36
50	0.61
55	1.01
60	1.66

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

The **withdrawal rates** are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of withdrawal applied in the current valuation are based on years of service for members with less than 5 years of service, and based on age for members with 5 or more years of service.

Sample rates of withdrawal from active employment are shown below:

		% of Active Members Separating within Next Year		
Sample Ages	**Years of Service**	**General County**	**Sheriff's Department**	**Martha T. Berry MCF**
ALL	0	12.00 %	4.00 %	12.00 %
	1	9.00	4.00	9.00
	2	8.00	3.00	8.00
	3	6.00	3.00	6.00
	4	6.00	3.00	6.00
25	5 & Over	5.80	1.60	5.80
30		5.30	1.10	5.30
35		4.30	1.00	4.30
40		3.30	0.75	3.30
45		2.30	0.50	2.30
50		1.80	0.25	1.80
55		1.75	0.25	1.75
60		1.50	0.25	1.50

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONCLUDED)

Health cost increases **-** See table below:

Year Beginning January 1,	Future Health Cost Increases	
	Medical/Rx	Dental/Vision
2015	9.00 %	4.00 %
2016	8.25	4.00
2017	7.50	4.00
2018	7.00	4.00
2019	6.50	4.00
2020	6.00	4.00
2021	5.50	4.00
2022	5.00	4.00
2023	4.50	4.00
2024 & After	4.00	4.00

The valuation health inflation assumption was used to develop the valuation results shown in this report.

Medicare coverage was assumed to be available for all covered employees on attainment of age 65.

Non-investment administration expenses - none.

Coverage: 85% of the males and 70% of the females were assumed to elect two-person health care coverage at retirement.

Spousal Coverage: 90% of both males and females are assumed to have spouse coverage continue after the member's death.

Deferred Retirement Option Plan (DROP) Participation: General County employees who participate in the DROP are assumed to stay in the Plan for 5 years. All other Plan member employees are assumed to stay in the DROP for 2 years before retiring.

Other: Liabilities were loaded by 0.4% for the expected future impact of the "Cadillac Plan" status as defined by the Patient Protection and Affordable Care Act tax.

GLOSSARY

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

GLOSSARY (CONCLUDED)

Annual Required Contribution (ARC). The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB). GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Inflation). The increase in the plan's cost over time. Trend includes all elements that may influence a plan's cost, assuming that enrollments and the plan benefits do not change. Trend includes such elements as, pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Postemployment Employee Benefits (OPEB). OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.

SECTION E

SUMMARY OF BENEFITS

Summary of Benefits as of December 31, 2013

Regular Retirement

All Groups	Coverage begins the first of the month following retirement date. Please refer to pages E-3 through E-7 for details.

Deferred Retirement

All Groups	Coverage begins the first of the month the age requirement is met and retirement is applied for. Please refer to pages E-3 through E-7 for details.

Disability Retirement

All Groups	Coverage begins when Retirement System disability pension begins, if the service requirements for healthcare eligibility are met. Please refer to pages E-3 through E-7 for details.

Death-In-Service

All Groups	Coverage for surviving spouse is based on hire date, receipt of Retirement System survivor pension, and satisfaction of the service requirements by the employee. Please refer to pages E-3 through E-7 for details.

Death After Retirement

All Groups	Spouse may be covered based on hire date and receipt of retiree's pension due to optional pension election. Assumes the service requirements are met. Please refer to pages E-3 through E-7 for details.

Retiree Premium Payments

All Groups	County and MTB employees hired after January 1, 2012 and some Sheriff department employees hired after June 1, 2013 will have a monthly premium payment in retirement equal to payments made by employees. Currently, $100 per month for a single contract.

SUMMARY OF BENEFITS AS OF DECEMBER 31, 2013

RETIREE CONTRIBUTION

All Groups	Retirees pay for 25% of their dental and vision coverage. Dental and vision coverage for spouse or other coverages may be offered but retiree must pay 100% of the cost. Employees hired after January 1, 2012 will not be eligible for County paid post-retirement benefits for a spouse. Retirees in this category will have the option of paying for 100% of the spouse's health coverage under the County group health plan. There shall be no contribution by the Employer for this option.

LIMITATIONS

All Groups	Coverages supplement Medicare once retiree and/or spouse are eligible for Medicare. Medicare eligible retirees must apply for both Part A & B.

BONUS PAYMENT

All Groups	A retiree may waive County paid retiree health coverage and receive a $1,500 annual payment. Waiver does not affect dental and optical benefits.

MACOMB COUNTY RETIREE HEALTH CARE PLAN
GENERAL COUNTY EMPLOYEES HIRED BEFORE 2006

Employee Group (Group Number)	Spouse Coverage: While Retiree is Alive	Spouse Coverage: After Retiree's Death	County Paid Coverage for Retiree/Spouse: Eligibility for Benefits	Retiree Deferred Retirement #	Spouse Deferred Retirement #	Duty Death (Spouse Coverage)	Disability Retirement (Retiree Coverage) (Duty)	Disability Retirement (Retiree Coverage) (Non Duty)	Disability Retirement (Spouse Coverage) (Duty)	Disability Retirement (Spouse Coverage) (Non Duty)	Retiree Employer Paid Portion of Medical Benefits
0,2,3,6,8,9,10,11,12,13,15,16,18,19 21,24,25,27,28,30,43,44,88	Yes	Yes*	Age 60 w/8 years Rule of 70 (min age 50)	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*	100%

- at time of retirement
* - as long as spouse is receving survivors benefit

Note: Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees for those retiring or DROPing after November 1, 2013.

GENERAL COUNTY EMPLOYEES HIRED AFTER 2006 BUT BEFORE 2012

Employee Group (Group Number)	Spouse Coverage: While Retiree is Alive	Spouse Coverage: After Retiree's Death	County Paid Coverage for Retiree/Spouse: Eligibility for Benefits	Retiree Deferred Retirement #	Spouse Deferred Retirement #	Duty Death (Spouse Coverage)	Disability Retirement (Retiree Coverage) (Duty)	Disability Retirement (Retiree Coverage) (Non Duty)	Disability Retirement (Spouse Coverage) (Duty)	Disability Retirement (Spouse Coverage) (Non Duty)	Retiree Employer Paid Portion of Medical Benefits
0,2,3,6,8,9,10,11,12,13,15,16,18,19 21,24,25,27,28,30,43,44,88	Yes	Yes*	Age 60 w/ 15 years Age 55 w/25 yrs	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*	100%

- at time of retirement
* - as long as spouse is receving survivors benefit

Note: Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees for those retiring or DROPing after November 1, 2013.

MACOMB COUNTY RETIREE HEALTH CARE PLAN
GENERAL COUNTY EMPLOYEES HIRED ON OR AFTER JANUARY 1, 2012

	Spouse Coverage		County Paid Coverage for Retiree/Spouse								
Employee Group (Group Number)	While Retiree is Alive	After Retiree's Death	Eligibility for Benefits	Retiree Deferred Retirement #	Spouse Deferred Retirement #	Duty Death (Spouse Coverage)	Disability Retirement (Retiree Coverage) (Duty)	Disability Retirement (Retiree Coverage) (Non Duty)	Disability Retirement (Spouse Coverage) (Duty)	Disability Retirement (Spouse Coverage) (Non Duty)	Retiree Employer Paid Portion of Medical Benefits
General Non Union (00)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 889 Animal Shelter (02)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
AFSCME Local 411 (03)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
Macomb County Environmental Health Association (06)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
Teamsters Local 214 Court Reporters (08)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
International Union of Operating Engineers (Boiler Operators) (09)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
TPOAM Circuit Court Officers (10)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
MNA Unit Health Department (11)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 412 Unit 49 Information Technology (12)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 889 Specialized Offices (13)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
Building Trades Association (15)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 412 Unit 46 Assistant Prosecutors (16)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
Teamsters Local 214 FOC Circuit Court (18)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 412 General (19)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
POAM JJC (21)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 889 MCCSA (24)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 412 Unit 75 Supervisors (25)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
TPOAM Juvenile Court & Justice Center Employees (28)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 412 Unit 95 (30)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 889 Probate Court/Corporation Counsel (43)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
UAW Local 412 Unit 98 MCCSA Professionals (44)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
AFSCME Council 25 (District Court Employees) (22) @	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
TPOAM Macomb County Senior Service Employees Association (27)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
AFSCME Local 6091 (Head Start Teachers) (29)@	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
General County Part Time employees (88)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%

*Coverage is available for an eligible spouse at the retiree's expense, no County paid benefit is available. # - at time of retirement @ Now included in Group 03

Note: Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees for those retiring orDROPing after November 1, 2013.

MACOMB COUNTY RETIREE HEALTH CARE PLAN
SHERIFF'S DEPARTMENT EMPLOYEES HIRED BEFORE JUNE 1, 2013

Employee Group (Group Number)	Spouse Coverage: While Retiree is Alive	Spouse Coverage: After Retiree's Death*	County Paid Coverage for Retiree/Spouse: Eligibility for Benefits	Deferred Retirement: Retiree	Deferred Retirement: Spouse *	Duty Death Spouse Coverage *	Disability Retirement Retiree Coverage: Duty	Disability Retirement Retiree Coverage: Non Duty	Disability Retirement Spouse Coverage *: Duty	Disability Retirement Spouse Coverage *: Non Duty	Employer Paid Portion of Retiree Health Benefits
POAM Command (01)	Yes	Yes	25 & out , or Age 60 with 8 yrs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
POAM Deputies (07)	Yes	Yes	Age 60 with 8yrs or 25 & out	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
POAM Dispatchers (07)	Yes	Yes	Age 60 w/8yrs or, 25 & out	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
POLC Captains (20)	Yes	Yes	25 & out , or Age 60 with 8 yrs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100% +
Corrections Deputies (26)	Yes	Yes	Age 60 w/8yrs or 25 & out	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100% +

** As long as spouse is receving survivors benefit.*

+ Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees, (retiree pays for part of the cost of benefits) except for Division 07 and Division 01.

MACOMB COUNTY RETIREE HEALTH CARE PLAN
SHERIFF'S DEPARTMENT EMPLOYEES HIRED AFTER JUNE 1, 2013

Employee Group (Group Number)	Spouse Coverage: While Retiree is Alive	Spouse Coverage: After Retiree's Death	County Paid Coverage for Retiree/Spouse: Eligibility for Benefits	Deferred Retirement: Retiree	Deferred Retirement: Spouse	Duty Death Spouse Coverage	Disability Retirement Retiree Coverage: Duty	Disability Retirement Retiree Coverage: Non Duty	Disability Retirement Spouse Coverage: Duty	Disability Retirement Spouse Coverage: Non Duty	Employer Paid Portion of Retiree Health Benefits
POAM Command (01)	No	No	25 & out	Yes	No	No	Yes	Yes	No	No	100%
POAM Deputies (07)	No	No	25 & out	Yes	Yes	No	Yes	Yes	No	No	100%
POAM Dispatchers (07)	No	No	25 & out	Yes	Yes	No	Yes	Yes	No	No	100%
POLC Captains (20)	No	No	25 & out	Yes	Yes	No	Yes	Yes	No	No	100% +
Corrections Deputies (26)	No	No	25 & out	Yes	Yes	No	Yes	Yes	No	No	100% +

No County paid spouse coverage for members hired after June 1, 2013 (November 21, 2013 for Division 07).

+ Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees, (retiree pays for part of the cost of benefits) except for Division 07 and Division 01.

MACOMB COUNTY RETIREE HEALTH CARE PLAN
MTB EMPLOYEES HIRED BEFORE JANUARY 1, 2012

Employee Group (Group Number)	Spouse Coverage		County Paid Coverage for Retiree/Spouse									Retiree Employer Paid Portion of Medical Benefits
	While Retiree is Alive	After Retiree's Death	Eligibility for Benefits	Retiree Deferred Retirement #	Spouse Deferred Retirement #	Duty Death (Spouse Coverage)	Disability Retirement (Retiree Coverage) (Duty)	Disability Retirement (Retiree Coverage) (Non Duty)	Disability Retirement (Spouse Coverage) (Duty)	Disability Retirement (Spouse Coverage) (Non Duty)		
MNA - RNs (04)	Yes	Yes*	Age 60 w/8yrs Age 55 w/25 yrs	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%
Service Employees International Union - LPNs (05)	Yes	Yes*	Age 60 w/8yrs Age 55 w/25 yrs	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%
AFSCME 411 (14) Hired before 1/1/2002	Yes	Yes*	Age 60 w/8yrs Rule of 70 min age (50)	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%
AFSCME 411 (14) Hired on /after 1/1/2002 & before 1/1/2012	Yes	Yes*	Age 60 w/8yrs Age 55 w/25 yrs	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%
MTB UAW Supervisors (42) Hired before 1/1/2002	Yes	Yes*	Age 60 w/8yrs Rule of 70 min age (50)	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100
MTB UAW Supervisors (42) Hired on /after 1/1/2002 & before 1/1/2012	Yes	Yes	Age 60 w/8yrs Age 55 w/25 yrs	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%
MTB Non Union Employees (40) Hired before 1/1/2002 or vested before 2/26/2009	Yes	Yes*	Age 60 w/8yrs Rule of 70 min age (50)	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%
MTB Non Union Employees (40) Hired on /after 1/1/2002 & before 1/1/2012	Yes	Yes*	Age 60 w/ 15 years Age 55 w/25 yrs	Yes	Yes*	Yes	Yes	Yes	Yes*	Yes*		100%

* - as long as spouse is receving survivors benefit   # - at time of retirement   For Individuals noted above (except div 40) hired after 2005, age 60 with 15 years of service is needed for benefit eligibility

Note: Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees for those retiring or DROPing after November 1, 2013.

Division 4,5,14 and 42 employees hired after 1/1/2010 are not eligible for employer funded retiree health benefits

MACOMB COUNTY RETIREE HEALTH CARE PLAN
MTB EMPLOYEES HIRED ON OR AFTER JANUARY 1, 2012

Employee Group (Group Number)	Spouse Coverage: While Retiree is Alive	Spouse Coverage: After Retiree's Death	County Paid Coverage for Retiree/Spouse: Eligibility for Benefits	Retiree Deferred Retirement #	Spouse Deferred Retirement #	Duty Death (Spouse Coverage)	Disability Retirement (Retiree Coverage) (Duty)	Disability Retirement (Retiree Coverage) (Non Duty)	Disability Retirement (Spouse Coverage) (Duty)	Disability Retirement (Spouse Coverage) (Non Duty)	Retiree Employer Paid Portion of Benefits
MNA - RNs (04)	No	No	NA	No	No	No	No	No	No	No	NA
Service Employees International Union - LPNs (05)	No	No	NA	No	No	No	No	No	No	No	NA
AFSCME 411 (14)	No	No	NA	No	No	No	No	No	No	No	NA
MTB Non Union Employees (40)	No*	No*	Age 60 w/15yrs Age 55 w/25 yrs	Yes	No*	No*	Yes	Yes	No*	No*	100%
MTB UAW Supervisors (42)	No	No	NA	No	No	No	No	No	No	No	NA

*Coverage is available for an eligible spouse at the retiree's expense, no County paid benefit is available.

#Employee is vested after completing 15 years of service

Division 4,5,14 and 42 employees hired after 1/1/2010 are not eligible for employer funded health benefits

Note: Employer paid portion of retiree health benefit for retiree will be equal to benefit provided to current employees for those retiring or DROPing after November 1, 2013.

Macomb County Retiree Health Care Plan

30 Year Amortization of Total Plan UAL Beginning 1/1/2014

Remaining Period (BOY)	Plan/ Fiscal Year	UAL BOY	UAL Payment	UAL EOY
30	2014	$ 262,636,883	$ 14,080,058	$ 267,732,953
29	2015	267,732,953	14,643,261	272,627,160
28	2016	272,627,160	22,714,864	269,517,792
27	2017	269,517,792	22,714,864	266,175,222
26	2018	266,175,222	22,714,864	262,581,959
25	2019	262,581,959	22,714,864	258,719,201
24	2020	258,719,201	22,714,864	254,566,736
23	2021	254,566,736	22,714,864	250,102,837
22	2022	250,102,837	22,714,864	245,304,145
21	2023	245,304,145	22,714,864	240,145,551
20	2024	240,145,551	22,714,864	234,600,062
19	2025	234,600,062	22,714,864	228,638,662
18	2026	228,638,662	22,714,864	222,230,157
17	2027	222,230,157	22,714,864	215,341,013
16	2028	215,341,013	22,714,864	207,935,184
15	2029	207,935,184	22,714,864	199,973,917
14	2030	199,973,917	22,714,864	191,415,556
13	2031	191,415,556	22,714,864	182,215,318
12	2032	182,215,318	22,714,864	172,325,062
11	2033	172,325,062	22,714,864	161,693,037
10	2034	161,693,037	22,714,864	150,263,610
9	2035	150,263,610	22,714,864	137,976,976
8	2036	137,976,976	22,714,864	124,768,844
7	2037	124,768,844	22,714,864	110,570,102
6	2038	110,570,102	22,714,864	95,306,455
5	2039	95,306,455	22,714,864	78,898,034
4	2040	78,898,034	22,714,864	61,258,982
3	2041	61,258,982	22,714,864	42,297,050
2	2042	42,297,050	22,714,864	21,912,935
1	2043	21,912,935	22,714,864	-

The chart above represents an illustration of the amortization of $262.6 million dollars in unfunded accrued liability (UAL) over a closed 30 year period using level percent of pay financing in the first 2 years of the schedule and level dollar financing in subsequent years. In practice, the UAL will differ from the illustration due to experience gains and losses, plan provision changes, payroll growth that differs from actuarial assumptions and other factors. As a result the UAL in any given year would be different from the illustration shown above. The assumptions and methods are consistent with those used in the most recent, annual actuarial valuation of the Retiree Health Care Plan as of 12/31/2013.

Appendix C: Evidence that the Health Care Obligation Bonds will Eliminate the Unfunded Health Care Accrued Liability

Sources and Uses	
Sources	
Bond Par Amount	$263,755,000
Total Sources	$263,755,000
Uses	
Deposit to Interim Trust	$262,636,883.00
Estimated Costs of Issuance	1,113,743.31
Contingency	4,374
Total Uses	$263,755,000

*** To be updated with actuarial report valuations as of December 31, 2013 supplemental valuation**

Actuarial Baseline											
Year	Accrued Liability	Trust Assets	Beginning UAL	Normal Cost	UAL Payment	Benefits Paid	Investment Income	Investment Return	Trust Assets	Accrued Liability	Ending UAL
2013	$399,748,074	$130,289,669	$269,458,405	$8,318,261	$22,000,309	$19,210,703	$10,188,270	7.50%	$151,585,806	$414,642,442	263,056,636
2014	414,642,442	151,585,806	263,056,636	8,006,047	22,000,309	21,170,599	11,700,276	7.50%	172,121,840	432,657,344	260,535,504
2015	432,657,344	172,121,840	260,535,504	7,831,182	22,000,309	22,750,310	13,174,682	7.50%	192,377,703	450,224,258	257,846,555
2016	450,224,258	192,377,703	257,846,555	7,616,166	22,000,309	24,440,504	14,622,427	7.50%	212,176,100	467,104,127	254,928,027
2017	467,104,127	212,176,100	254,928,027	7,374,476	22,000,309	26,255,067	16,030,197	7.50%	231,326,015	483,088,992	251,762,977
2018	483,088,992	231,326,015	251,762,977	7,156,180	22,000,309	27,980,438	17,393,553	7.50%	249,895,619	498,162,074	248,266,455
2019	498,162,074	249,895,619	248,266,455	6,931,425	22,000,309	29,633,996	18,715,837	7.50%	267,909,194	512,274,095	244,364,901
2020	512,274,095	267,909,194	244,364,901	6,677,894	22,000,309	31,245,522	19,996,915	7.50%	285,338,790	525,485,830	240,147,040
2021	525,485,830	285,338,790	240,147,040	6,405,659	22,000,309	32,644,208	21,241,475	7.50%	302,342,025	537,984,381	235,642,356
2022	537,984,381	302,342,025	235,642,356	6,108,580	22,000,309	33,705,509	22,465,779	7.50%	319,211,184	549,990,923	230,779,739
2023	549,990,923	319,211,184	230,779,739	5,806,265	22,000,309	35,135,143	23,666,017	7.50%	335,548,633	561,082,160	225,533,527
2024	561,082,160	335,548,633	225,533,527	5,475,497	22,000,309	36,573,052	24,825,001	7.50%	351,276,387	571,159,894	219,883,507
2025	571,159,894	351,276,387	219,883,507	5,119,497	22,000,309	38,016,147	25,937,116	7.50%	366,317,163	580,130,117	213,812,954
2026	580,130,117	366,317,163	213,812,954	4,793,769	22,000,309	39,524,841	26,996,384	7.50%	380,582,783	587,859,500	207,276,717
2027	587,859,500	380,582,783	207,276,717	4,446,762	22,000,309	40,959,583	27,999,490	7.50%	394,069,761	594,252,921	200,183,160
2028	594,252,921	394,069,761	200,183,160	4,057,690	22,000,309	42,152,428	28,951,691	7.50%	406,927,023	599,457,005	192,529,982
2029	599,457,005	406,927,023	192,529,982	3,673,726	22,000,309	43,665,247	29,844,856	7.50%	418,780,667	603,110,614	184,329,947
2030	603,110,614	418,780,667	184,329,947	3,321,469	22,000,309	45,169,768	30,664,250	7.50%	429,596,927	605,102,422	175,505,495
2031	605,102,422	429,596,927	175,505,495	2,979,764	22,000,309	46,538,310	31,411,336	7.50%	439,450,026	605,448,727	165,998,701
2032	605,448,727	439,450,026	165,998,701	2,646,921	22,000,309	47,976,874	32,083,890	7.50%	448,204,272	603,971,262	155,766,990
2033	603,971,262	448,204,272	155,766,990	2,330,872	22,000,309	49,488,362	32,671,926	7.50%	455,719,017	600,478,029	144,759,012
2034	600,478,029	455,719,017	144,759,012	2,035,872	22,000,309	50,866,922	33,172,774	7.50%	462,061,050	594,964,571	132,903,521
2035	594,964,571	462,061,050	132,903,521	1,775,824	22,000,309	51,734,187	33,606,152	7.50%	467,709,148	587,849,712	120,140,564
2036	587,849,712	467,709,148	120,140,564	1,548,491	22,000,309	52,413,584	33,995,757	7.50%	472,840,120	579,255,724	106,415,604
2037	579,255,724	472,840,120	106,415,604	1,310,414	22,000,309	53,171,034	34,343,247	7.50%	477,323,057	568,978,106	91,655,049
2038	568,978,106	477,323,057	91,655,049	1,074,313	22,000,309	53,618,106	34,653,849	7.50%	481,433,421	557,208,538	75,775,117
2039	557,208,538	481,433,421	75,775,117	887,649	22,000,309	53,888,624	34,944,982	7.50%	485,377,737	544,071,419	58,693,682
2040	544,071,419	485,377,737	58,693,682	730,384	22,000,309	54,038,651	35,229,282	7.50%	489,299,061	529,625,254	40,326,193
2041	529,625,254	489,299,061	40,326,193	593,439	22,000,309	54,015,247	35,519,123	7.50%	493,396,685	513,972,222	20,575,537
2042	513,972,222	493,396,685	20,575,537	481,151	22,000,309	54,290,904	35,811,897	7.50%	497,399,138	497,399,138	(0)
2043	497,399,138	497,399,138	(0)	389,066		53,054,186	35,329,993	7.50%	480,064,011	480,064,011	(0)
2044	480,064,011	480,064,011	(0)	310,914		52,244,033	34,057,309	7.50%	462,188,201	462,188,201	(0)
2045	462,188,201	462,188,201	(0)	244,641		51,438,899	32,744,330	7.50%	443,738,274	443,738,273	(1)
2046	443,738,273	443,738,274	(1)	190,612		50,483,781	31,394,377	7.50%	424,839,481	424,839,481	(0)
2047	424,839,481	424,839,481	(0)	146,599		49,244,952	30,021,773	7.50%	405,762,901	405,762,901	(0)
2048	405,762,901	405,762,901	(0)	109,011		47,953,085	28,638,065	7.50%	386,556,892	386,556,892	(0)
2049	386,556,892	386,556,892	(0)	79,935		46,601,974	27,247,190	7.50%	367,282,044	367,282,043	(1)
2050	367,282,043	367,282,044	(1)	58,498		45,238,125	25,851,917	7.50%	347,954,334	347,954,333	(1)
2051	347,954,333	347,954,334	(1)	42,097		43,693,677	24,459,641	7.50%	328,762,395	328,762,394	(1)
2052	328,762,394	328,762,395	(1)	28,952		42,073,019	23,080,527	7.50%	309,798,855	309,798,854	(1)
2053	309,798,854	309,798,855	(1)	19,749		40,529,888	21,715,784	7.50%	291,004,500	291,004,499	(1)
2054	291,004,499	291,004,500	(1)	13,848		38,929,850	20,365,987	7.50%	272,454,485	272,454,484	(1)
2055	272,454,484	272,454,485	(1)	8,807		37,287,512	19,036,135	7.50%	254,211,915	254,211,914	(1)
2056	254,211,914	254,211,915	(1)	5,094		35,648,497	17,729,266	7.50%	236,297,778	236,297,777	(1)
2057	236,297,777	236,297,778	(1)	3,060		33,948,093	16,449,395	7.50%	218,802,140	218,802,139	(1)
2058	218,802,139	218,802,140	(1)	1,928		32,221,251	15,201,936	7.50%	201,784,752	201,784,752	(0)
2059	201,784,752	201,784,752	(0)	1,017		30,499,101	13,990,178	7.50%	185,276,847	185,276,846	(1)
2060	185,276,846	185,276,847	(1)	429		28,753,565	12,817,521	7.50%	169,341,232	169,341,231	(1)
2061	169,341,231	169,341,232	(1)	299		27,004,805	11,687,923	7.50%	154,024,649	154,024,648	(1)

Appendix D: Debt Service Amortization Schedules

The PFM Group
Financial & Investment Advisors

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TABLE OF CONTENTS

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

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Financial & Investment Advisors

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SOURCES AND USES OF FUNDS

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Sources:		
Bond Proceeds:		
Par Amount		263,755,000.00
		263,755,000.00

Uses:		
Project Fund Deposits:		
Unfunded Actuarial Accrued Liability		262,636,883.00
Delivery Date Expenses:		
Cost of Issuance		771,217.00
Underwriter's Discount		342,526.31
		1,113,743.31
Other Uses of Funds:		
Additional Proceeds		4,373.69
		263,755,000.00

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BOND DEBT SERVICE

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
06/01/2015	7,275,000	0.457%	4,857,352.87	12,132,352.87	
12/01/2015			5,096,379.65	5,096,379.65	17,228,732.52
06/01/2016	7,070,000	1.009%	5,096,379.65	12,166,379.65	
12/01/2016			5,060,711.50	5,060,711.50	17,227,091.15
06/01/2017	7,165,000	1.560%	5,060,711.50	12,225,711.50	
12/01/2017			5,004,824.50	5,004,824.50	17,230,536.00
06/01/2018	7,295,000	2.138%	5,004,824.50	12,299,824.50	
12/01/2018			4,926,840.95	4,926,840.95	17,226,665.45
06/01/2019	7,465,000	2.488%	4,926,840.95	12,391,840.95	
12/01/2019			4,833,976.35	4,833,976.35	17,225,817.30
06/01/2020	7,665,000	2.736%	4,833,976.35	12,498,976.35	
12/01/2020			4,729,119.15	4,729,119.15	17,228,095.50
06/01/2021	7,890,000	3.036%	4,729,119.15	12,619,119.15	
12/01/2021			4,609,348.95	4,609,348.95	17,228,468.10
06/01/2022	8,140,000	3.209%	4,609,348.95	12,749,348.95	
12/01/2022			4,478,742.65	4,478,742.65	17,228,091.60
06/01/2023	8,415,000	3.409%	4,478,742.65	12,893,742.65	
12/01/2023			4,335,308.98	4,335,308.98	17,229,051.63
06/01/2024	8,710,000	3.509%	4,335,308.98	13,045,308.98	
12/01/2024			4,182,492.03	4,182,492.03	17,227,801.01
06/01/2025	9,030,000	3.709%	4,182,492.03	13,212,492.03	
12/01/2025			4,015,030.68	4,015,030.68	17,227,522.71
06/01/2026	9,380,000	3.909%	4,015,030.68	13,395,030.68	
12/01/2026			3,831,698.58	3,831,698.58	17,226,729.26
06/01/2027	9,765,000	4.059%	3,831,698.58	13,596,698.58	
12/01/2027			3,633,517.90	3,633,517.90	17,230,216.48
06/01/2028	10,170,000	4.159%	3,633,517.90	13,803,517.90	
12/01/2028			3,422,032.75	3,422,032.75	17,225,550.65
06/01/2029	10,610,000	4.259%	3,422,032.75	14,032,032.75	
12/01/2029			3,196,092.80	3,196,092.80	17,228,125.55
06/01/2030	11,090,000	4.586%	3,196,092.80	14,286,092.80	
12/01/2030			2,941,799.10	2,941,799.10	17,227,891.90
06/01/2031	11,610,000	4.586%	2,941,799.10	14,551,799.10	
12/01/2031			2,675,581.80	2,675,581.80	17,227,380.90
06/01/2032	12,155,000	4.586%	2,675,581.80	14,830,581.80	
12/01/2032			2,396,867.65	2,396,867.65	17,227,449.45
06/01/2033	12,725,000	4.586%	2,396,867.65	15,121,867.65	
12/01/2033			2,105,083.40	2,105,083.40	17,226,951.05
06/01/2034	13,325,000	4.586%	2,105,083.40	15,430,083.40	
12/01/2034			1,799,541.15	1,799,541.15	17,229,624.55
06/01/2035	13,955,000	4.686%	1,799,541.15	15,754,541.15	
12/01/2035			1,472,575.50	1,472,575.50	17,227,116.65
06/01/2036	14,625,000	4.686%	1,472,575.50	16,097,575.50	
12/01/2036			1,129,911.75	1,129,911.75	17,227,487.25
06/01/2037	15,325,000	4.686%	1,129,911.75	16,454,911.75	
12/01/2037			770,847.00	770,847.00	17,225,758.75

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BOND DEBT SERVICE

Macomb County (LTGO)
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(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
06/01/2038	16,065,000	4.686%	770,847.00	16,835,847.00	
12/01/2038			394,444.05	394,444.05	17,230,291.05
06/01/2039	16,835,000	4.686%	394,444.05	17,229,444.05	
12/01/2039					17,229,444.05
	263,755,000		166,942,890.51	430,697,890.51	430,697,890.51

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BOND PRICING

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Bond Component	Maturity Date	Amount	Rate	Yield	Price
Bond Component:					
	06/01/2015	7,275,000	0.457%	0.457%	100.000
	06/01/2016	7,070,000	1.009%	1.009%	100.000
	06/01/2017	7,165,000	1.560%	1.560%	100.000
	06/01/2018	7,295,000	2.138%	2.138%	100.000
	06/01/2019	7,465,000	2.488%	2.488%	100.000
	06/01/2020	7,665,000	2.736%	2.736%	100.000
	06/01/2021	7,890,000	3.036%	3.036%	100.000
	06/01/2022	8,140,000	3.209%	3.209%	100.000
	06/01/2023	8,415,000	3.409%	3.409%	100.000
	06/01/2024	8,710,000	3.509%	3.509%	100.000
	06/01/2025	9,030,000	3.709%	3.709%	100.000
	06/01/2026	9,380,000	3.909%	3.909%	100.000
	06/01/2027	9,765,000	4.059%	4.059%	100.000
	06/01/2028	10,170,000	4.159%	4.159%	100.000
	06/01/2029	10,610,000	4.259%	4.259%	100.000
		126,045,000			
Term Bond 2036:					
	06/01/2030	11,090,000	4.586%	4.586%	100.000
	06/01/2031	11,610,000	4.586%	4.586%	100.000
	06/01/2032	12,155,000	4.586%	4.586%	100.000
	06/01/2033	12,725,000	4.586%	4.586%	100.000
	06/01/2034	13,325,000	4.586%	4.586%	100.000
		60,905,000			
Term Bond 2039:					
	06/01/2035	13,955,000	4.686%	4.686%	100.000
	06/01/2036	14,625,000	4.686%	4.686%	100.000
	06/01/2037	15,325,000	4.686%	4.686%	100.000
	06/01/2038	16,065,000	4.686%	4.686%	100.000
	06/01/2039	16,835,000	4.686%	4.686%	100.000
		76,805,000			
		263,755,000			

Dated Date	12/10/2014	
Delivery Date	12/10/2014	
First Coupon	06/01/2015	
Par Amount	263,755,000.00	
Original Issue Discount		
Production	263,755,000.00	100.000000%
Underwriter's Discount	(342,526.31)	(0.129865%)
Purchase Price	263,412,473.69	99.870135%
Accrued Interest		
Net Proceeds	263,412,473.69	

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BOND SUMMARY STATISTICS

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Dated Date	12/10/2014
Delivery Date	12/10/2014
Last Maturity	06/01/2039
Arbitrage Yield	4.317235%
True Interest Cost (TIC)	4.329989%
Net Interest Cost (NIC)	4.383705%
All-In TIC	4.358796%
Average Coupon	4.374729%
Average Life (years)	14.468
Duration of Issue (years)	10.406
Par Amount	263,755,000.00
Bond Proceeds	263,755,000.00
Total Interest	166,942,890.51
Net Interest	167,285,416.82
Total Debt Service	430,697,890.51
Maximum Annual Debt Service	17,230,536.00
Average Annual Debt Service	17,597,462.33
Underwriter's Fees (per $1000)	
Average Takedown	1.000000
Other Fee	0.298653
Total Underwriter's Discount	1.298653
Bid Price	99.870135

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Bond Component	126,045,000.00	100.000	3.619%	8.035	83,126.30
Term Bond 2036	60,905,000.00	100.000	4.586%	17.567	77,958.40
Term Bond 2039	76,805,000.00	100.000	4.686%	22.569	110,599.20
	263,755,000.00			14.468	271,683.90

	TIC	All-In TIC	Arbitrage Yield
Par Value	263,755,000.00	263,755,000.00	263,755,000.00
+ Accrued Interest			
+ Premium (Discount)			
- Underwriter's Discount	(342,526.31)	(342,526.31)	
- Cost of Issuance Expense		(771,217.00)	
- Other Amounts			
Target Value	263,412,473.69	262,641,256.69	263,755,000.00
Target Date	12/10/2014	12/10/2014	12/10/2014
Yield	4.329989%	4.358796%	4.317235%

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PROOF OF ARBITRAGE YIELD

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Date	Debt Service	Present Value to 12/10/2014 @ 4.3172350905%
06/01/2015	12,132,352.87	11,888,683.80
12/01/2015	5,096,379.65	4,888,498.75
06/01/2016	12,166,379.65	11,423,523.86
12/01/2016	5,060,711.50	4,651,310.17
06/01/2017	12,225,711.50	10,999,244.53
12/01/2017	5,004,824.50	4,407,603.91
06/01/2018	12,299,824.50	10,603,216.14
12/01/2018	4,926,840.95	4,157,499.78
06/01/2019	12,391,840.95	10,235,864.21
12/01/2019	4,833,976.35	3,908,572.75
06/01/2020	12,498,976.35	9,892,660.77
12/01/2020	4,729,119.15	3,663,902.60
06/01/2021	12,619,119.15	9,570,126.92
12/01/2021	4,609,348.95	3,421,789.09
06/01/2022	12,749,348.95	9,264,599.50
12/01/2022	4,478,742.65	3,185,809.06
06/01/2023	12,893,742.65	8,977,752.43
12/01/2023	4,335,308.98	2,954,838.00
06/01/2024	13,045,308.98	8,703,480.94
12/01/2024	4,182,492.03	2,731,484.42
06/01/2025	13,212,492.03	8,446,432.91
12/01/2025	4,015,030.68	2,512,479.11
06/01/2026	13,395,030.68	8,205,070.12
12/01/2026	3,831,698.58	2,297,496.80
06/01/2027	13,596,698.58	7,980,351.85
12/01/2027	3,633,517.90	2,087,569.13
06/01/2028	13,803,517.90	7,762,977.69
12/01/2028	3,422,032.75	1,883,856.03
06/01/2029	14,032,032.75	7,561,520.44
12/01/2029	3,196,092.80	1,685,904.28
06/01/2030	14,286,092.80	7,376,527.96
12/01/2030	2,941,799.10	1,486,882.09
06/01/2031	14,551,799.10	7,199,547.51
12/01/2031	2,675,581.80	1,295,781.39
06/01/2032	14,830,581.80	7,030,669.55
12/01/2032	2,396,867.65	1,112,263.14
06/01/2033	15,121,867.65	6,869,006.31
12/01/2033	2,105,083.40	936,014.94
06/01/2034	15,430,083.40	6,715,938.98
12/01/2034	1,799,541.15	766,699.61
06/01/2035	15,754,541.15	6,570,436.35
12/01/2035	1,472,575.50	601,161.30
06/01/2036	16,097,575.50	6,432,783.13
12/01/2036	1,129,911.75	441,985.43
06/01/2037	16,454,911.75	6,300,630.08

PROOF OF ARBITRAGE YIELD

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Date	Debt Service	Present Value to 12/10/2014 @ 4.3172350905%
12/01/2037	770,847.00	288,922.66
06/01/2038	16,835,847.00	6,176,939.97
12/01/2038	394,444.05	141,660.51
06/01/2039	17,229,444.05	6,057,029.10
	430,697,890.51	263,755,000.00

Proceeds Summary

Delivery date	12/10/2014
Par Value	263,755,000.00
Target for yield calculation	263,755,000.00

FORM 8038 STATISTICS

Macomb County (LTGO)
Proposed Limited Tax General Obligation Bonds, Series 2014
(Federally Taxable)
Based on J.P. Morgan indicative rates + 0.20%
(September 9, 2014)

Dated Date	12/10/2014
Delivery Date	12/10/2014

Bond Component	Date	Principal	Coupon	Price	Issue Price	Redemption at Maturity
Bond Component:						
	06/01/2015	7,275,000.00	0.457%	100.000	7,275,000.00	7,275,000.00
	06/01/2016	7,070,000.00	1.009%	100.000	7,070,000.00	7,070,000.00
	06/01/2017	7,165,000.00	1.560%	100.000	7,165,000.00	7,165,000.00
	06/01/2018	7,295,000.00	2.138%	100.000	7,295,000.00	7,295,000.00
	06/01/2019	7,465,000.00	2.488%	100.000	7,465,000.00	7,465,000.00
	06/01/2020	7,665,000.00	2.736%	100.000	7,665,000.00	7,665,000.00
	06/01/2021	7,890,000.00	3.036%	100.000	7,890,000.00	7,890,000.00
	06/01/2022	8,140,000.00	3.209%	100.000	8,140,000.00	8,140,000.00
	06/01/2023	8,415,000.00	3.409%	100.000	8,415,000.00	8,415,000.00
	06/01/2024	8,710,000.00	3.509%	100.000	8,710,000.00	8,710,000.00
	06/01/2025	9,030,000.00	3.709%	100.000	9,030,000.00	9,030,000.00
	06/01/2026	9,380,000.00	3.909%	100.000	9,380,000.00	9,380,000.00
	06/01/2027	9,765,000.00	4.059%	100.000	9,765,000.00	9,765,000.00
	06/01/2028	10,170,000.00	4.159%	100.000	10,170,000.00	10,170,000.00
	06/01/2029	10,610,000.00	4.259%	100.000	10,610,000.00	10,610,000.00
Term Bond 2036:						
	06/01/2030	11,090,000.00	4.586%	100.000	11,090,000.00	11,090,000.00
	06/01/2031	11,610,000.00	4.586%	100.000	11,610,000.00	11,610,000.00
	06/01/2032	12,155,000.00	4.586%	100.000	12,155,000.00	12,155,000.00
	06/01/2033	12,725,000.00	4.586%	100.000	12,725,000.00	12,725,000.00
	06/01/2034	13,325,000.00	4.586%	100.000	13,325,000.00	13,325,000.00
Term Bond 2039:						
	06/01/2035	13,955,000.00	4.686%	100.000	13,955,000.00	13,955,000.00
	06/01/2036	14,625,000.00	4.686%	100.000	14,625,000.00	14,625,000.00
	06/01/2037	15,325,000.00	4.686%	100.000	15,325,000.00	15,325,000.00
	06/01/2038	16,065,000.00	4.686%	100.000	16,065,000.00	16,065,000.00
	06/01/2039	16,835,000.00	4.686%	100.000	16,835,000.00	16,835,000.00
		263,755,000.00			263,755,000.00	263,755,000.00

	Maturity Date	Interest Rate	Issue Price	Stated Redemption at Maturity	Weighted Average Maturity	Yield
Final Maturity	06/01/2039	4.686%	16,835,000.00	16,835,000.00		
Entire Issue			263,755,000.00	263,755,000.00	14.4683	4.3172%

Proceeds used for accrued interest	0.00
Proceeds used for bond issuance costs (including underwriters' discount)	1,113,743.31
Proceeds used for credit enhancement	0.00
Proceeds allocated to reasonably required reserve or replacement fund	0.00

Appendix E: Evidence of Rating

STANDARD & POOR'S
RATINGS SERVICES
McGRAW HILL FINANCIAL

RatingsDirect®

Summary:

Lake St. Clair Clean Water Initiative, Michigan Macomb County; General Obligation

Primary Credit Analyst:
Katilyn Pulcher, ASA, CERA, Chicago (1) 312-233-7055; katilyn.pulcher@standardandpoors.com

Secondary Contact:
Errol R Arne, New York (1) 212-438-2379; errol.arne@standardandpoors.com

Table Of Contents

Summary:

Lake St. Clair Clean Water Initiative, Michigan Macomb County; General Obligation

Credit Profile		
US$13.725 mil dr dist rfdg bnds (Macomb Cnty) (St Clair Shores-Roseville-Eastpointe Dr Dist) ser 2013 due 10/01/2029		
Long Term Rating	AA+/Stable	New

Rationale

Standard & Poor's Ratings Services has assigned its 'AA+' long-term rating to the Lake St. Clair Clean Water Initiative ("the Initiative"), Mich.'s series 2013 drainage district refunding bonds, which are ultimately secured by Macomb County's limited-tax, full faith and credit GO pledge, based on our new local GO criteria. The outlook is stable.

The Initiative's bonds are secured by the GO pledge of the cities of St. Claire Shores, Roseville, and Eastpointe, but are ultimately secured by the county's full faith and credit pledge limited-tax GO pledge. Proceeds will be used to advance refund various outstanding issues for interest cost savings.

The 'AA+' rating reflects our assessment of the following factors for the county, including its:

- Very strong budgetary flexibility with 2012 audited reserves at 149% of general fund expenditures;
- Very strong liquidity, providing very strong cash levels to cover both debt service and expenditures;
- Strong management with good financial policies and practices;
- Strong budgetary performance, with expected break-even or better general fund operations but slight total governmental fund deficits;
- Adequate debt and contingent liability profile, driven mostly by the county's high indirect drainage district debt; and
- Weak economy, despite the county's access to the broad and diverse economy of the Detroit metropolitan statistical area (MSA).

Very strong budgetary flexibility

In our opinion, the county's budgetary flexibility is very strong, with available reserves, including the general and delinquent tax revolving funds, well above 100% of expenditures for the past several years and no plans to significantly spend them down. For audited fiscal 2012, reserves were $218 million or 149% of expenditures. The county anticipates reserves at fiscal 2013 and 2014 year-end will be $216 million, which will exceed 130% of expenditures in each year.

Very strong liquidity

Supporting the county's finances is liquidity we consider very strong, with total government available cash at 115% of total governmental fund expenditures and over 4,000% of debt service. We believe the county has strong access to external liquidity as it has issued bonds frequently during the past 15 years, including GO and Michigan transportation fund bonds.

Strong management conditions

We view the county's management conditions as strong with good financial practices and policies. Management reviews revenue and expenditures regularly. Officials pass a three-year budget that allows the county to expect the short-term effects of financial decisions on the county. The formal capital improvement budget covers five fiscal years. The county treasurer enacted an investment policy with quarterly reports on holdings and performance. The county recently adopted formal debt management and fund balance policies. The fund balance policy establishes a minimum unassigned balance of 20% of next year's budgeted expenditures in the general fund, which it exceeded at fiscal year-end 2012 with 54.5% of expenditures in the general fund.

Strong budgetary performance

The county's budgetary performance has been strong overall, in our view, with a surplus of 15% in the general fund in fiscal 2012 and a surplus of 3.5% in the total governmental funds. Though the county posted surplus operations across all funds in 2012, it is projecting slight deficits in the total governmental funds and break-even or better general fund operations in fiscal years 2013 and 2014. We expect the county will be in a good position to maintain performance in line with its 2014 expectations. As such, we do not anticipate changing our view of this rating factor. According to officials, the county does not have any deferred expenditures to pay off in the next couple of years.

Adequate debt and contingent liability profile

In our opinion, Macomb County's debt and contingent liability profile is adequate, with total governmental fund debt service at 2.8% of total governmental fund expenditures and net direct debt at 98% of total governmental fund revenue and slated to rise. The county plans to issue approximately $18 million in GO bonds to renovate one of its administrative offices and a courthouse. We expect this issuance will bring the net direct debt to roughly 103% of total governmental fund revenue. The county does not have any self-supporting debt and has used revenue bonds to upgrade and modernize its infrastructure.

The county sponsors and administers the Macomb County Employees' Retirement System, a single-employer defined-benefit plan covering substantially all of the county employees, including general staff, the sheriff's department, and the department of roads. According to the 2012 audit, the county made its required payment of $16.6 million to this plan, which is 97% funded. We understand management aims to put all new employees into a defined-contribution plan in the near future. The county sponsors and administers a single-employer defined-benefit postretirement health care plan that provides certain benefits to retirees and their spouses, so long as the retiree is receiving a pension from the Macomb County Employees Retirement System. The county pays the bulk of the premiums for its plan members, as well as additional amounts to prefund the liability in years in which it can afford to do so. The county contributed $13.8 million to the plan in 2012. We understand management is negotiating with its employee unions to cease offering retiree health care benefits to new employees. Macomb County established and administers a program that provides sick leave payouts to eligible employees of the primary government through a single-employer defined-benefit postemployment plan. It addresses this liability on a pay-as-you-go basis and made a contribution of $13.8 million in 2012 . The county also contributes to the Michigan Employers' Retirement System for retiree health care benefits for the department of roads and contributed $7.6 million to this plan in 2012. The combined ARC pension and other postemployment benefit (OPEB) pay-as-you-go costs for fiscal 2012 were above 10% of total governmental fund expenditures. However, the increase hasn't caused budgetary stress, given the county's strong budgetary performance. Furthermore, due to the high funded status of the pension plan and pay-as-you-go financing strategy for the OPEB plan, we do not expect contributions to rise to a level that would cause budgetary stress in the medium term.

Weak economy

Macomb County is on the northern edge of Detroit in southeast Michigan and benefits from access to this broad and diverse MSA. The economic downturn has had a pronounced effect on the region's economy, especially the county's property tax and employment bases. After a period of growth, the county's tax base decreased 14% during the past four years, to $24.1 billion. County officials are projecting 1.6% growth in the tax base in 2014 and 2.25% growth in both 2015 and 2016. Despite the drop in recent years, per-capita market value for the county is $59,344.

Macomb County has a material automotive presence and the economic turndown contributed to high unemployment. In 2012, its 10.4% average rate was well above the state (9.1%) and national (8.1%) levels. The county has a projected per-capita effective buying income of 96% of the U.S. level.

Strong institutional framework

We consider the institutional framework for Michigan counties with a population greater than 4,000 strong. (See the Institutional Framework score for Michigan.)

Outlook

The stable outlook reflects our expectation that we will not change the rating over the next two years because we anticipate the county will maintain its very strong liquidity and budgetary flexibility, which is supported by strong management. Upward rating potential is limited because we do not expect Macomb County's economy or debt and contingent liability profile to materially improve during the same period.

Related Criteria And Research

Related Criteria

- USPF Criteria: Local Government GO Ratings Methodology And Assumptions, Sept. 12, 2013

Related Research

- S&P Public Finance Local GO Criteria: How We Adjust Data For Analytic Consistency, Sept. 12, 2013
- Institutional Framework Overview: Michigan Local Governments

Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com. All ratings affected by this rating action can be found on Standard & Poor's public Web site at www.standardandpoors.com. Use the Ratings search box located in the left column.

MOODY'S
INVESTORS SERVICE

New Issue: Moody's assigns Aa1 to Macomb County, MI's $16.7M GOLT Building Authority Refunding Bonds Ser. 2014

Global Credit Research - 17 Jan 2014

Aa1 rating affirmed on outstanding GOLT debt; outlook remains stable

MACOMB (COUNTY OF) MI
Counties
MI

Moody's Rating

ISSUE	RATING
Building Authority Refunding Bonds, Series 2014	Aa1
Sale Amount $16,720,000	
Expected Sale Date 01/23/14	
Rating Description General Obligation Limited Tax	

Moody's Outlook STA

Opinion

NEW YORK, January 17, 2014 --Moody's Investors Service has assigned a Aa1 rating to the Macomb County Building Authority's $16.7 million Building Authority Refunding Bonds Series 2014. The bonds are secured by rental payments to be made by the county to the building authority, with such rental payments constituting a full faith and credit general obligation of the county payable from all operating funds. Proceeds of the bonds will be used to refund the outstanding Series 2007 Building Authority Bonds for anticipated interest savings.

Concurrent with the rating assignment, Moody's has affirmed the Aa1 rating on outstanding debt that is secured by the general obligation limited tax (GOLT) pledge of Macomb County. The Aa1 rating applies to $79.7 million of a total $341.9 million of outstanding debt inclusive of the current sale. The outlook on the rating is stable.

SUMMARY RATING RATIONALE

The Aa1 rating incorporates the county's very large tax base that is showing signs of renewed growth following years of depreciation, moderate economic concentration given the county's links to the automotive industry of the metro Detroit (Caa3 negative) region, very strong financial position that reflects sound fiscal management, low direct debt burden, and moderate exposure to unfunded pension liabilities. The stable outlook reflects the expectation that, despite historic and ongoing ties to the automotive sector and the associated potential for future economic challenges, the county will maintain its very strong credit quality given the health of financial reserves and a commitment to prudent fiscal management.

STRENGTHS

- Very large tax base with signs of renewed growth

- Multi-year trend of General Fund operating surpluses

- Strong fiscal management that successfully controlled cost growth in an environment of falling revenue

- Modest direct debt burden

CHALLENGES

- Moderate economic concentration given the county's ties to the automotive industry

- Modest socioeconomic characteristics relative to equally rated municipalities

DETAILED CREDIT DISCUSSION

VERY LARGE TAX BASE NORTH OF DETROIT; TREND OF DEPRECIATION REVERSED IN 2013

The county's tax base is showing signs of renewed growth following five consecutive years of valuation decline. Located in southeast Michigan, just north of Detroit, the county was notably impacted by the recent economic recession, which contributed to an 8.5% average annual rate of full valuation decline from 2008 through 2012. Favorably, the trend reversed in 2013 when the county recorded a 4.8% increase in full valuation. While the full valuation remains a sizeable $51.7 billion, it remains well below the pre-recession peak of $76.7 billion.

Similar to many communities of southeast Michigan, the county maintains close economic ties to the automotive industry. The Big Three US auto companies, General Motors Company (Ba1 stable), Chrysler Group LLC (B1 stable) and Ford Motor Company (Baa3 stable) remain the three largest taxpayers in the county, comprising a combined 5% of taxable valuation. They are also three of the four largest employers in the county and have all made considerable investments in regional operations following the recession and stabilization of the domestic automobile industry. Other top employers include the US Government, Henry Ford Health System, and St. John's Hospital.

The county's unemployment rate was 7.8% in November 2013, which was considerably lower than the 17.6% recorded in July 2009. The county's labor force is down nearly 6% since that time, but has increased over the past couple years as economic conditions stabilized. County population has modestly, though steadily, increased over the past few decades, a trend that includes 6.7% growth between the 2000 and 2010 census periods. Median family income within the county is estimated at 107% of the national figure.

FINANCIAL OPERATIONS EXPECTED TO REMAIN SOLID GIVEN COMMITMENT TO PRUDENT FISCAL MANAGEMENT

The county is expected to maintain a strong financial profile going forward given its recent trend of favorable operating results and management's commitment to sustaining operational balance. After steadily spending down General Fund reserves through fiscal 2008, the county has closed the last four fiscal years with sizeable operating surpluses that progressively built the General Fund balance to $80.1 million, or a very healthy 40% of revenues, at the close of fiscal 2012. Additional liquidity is provided by significant cash and unrestricted net asset balances in the county's Delinquent Tax Revolving Fund (DTRF), which is utilized to purchase the delinquent taxes of underlying local governments, with the county collecting fees and interest expense on the taxes that are subsequently received. Inclusive of unrestricted net assets of the DTRF, the county's available fund balance at the close of fiscal 2012 was $197.8 million, or a strong 99% of operating revenue. The combined General Fund and DTRF cash balance was $138.1 million, also strong at 69% of operating revenue.

Positive operating results over the past four years have primarily been driven by management's commitment to controlling cost growth by providing the same level of county services with a reduced headcount. Such adjustments, which primarily consisted of maintaining vacancies following retirements and the consolidation of various departments, were necessary given the strong downward pressure on operating revenue. Steady depreciation of the tax base resulted in a cumulative 23% decline in property tax revenue from fiscal 2007 through fiscal 2012. The downward trend persisted despite a 9% increase in the county's tax rate in 2009 to take advantage of existing taxing margin under the charter limit. As property taxes comprise close to 60% of the county's annual operating budget, the annual decline in collected taxes drove a similar decline in total revenue. The trend of operating surpluses since fiscal 2008 was supported by a cumulative 18% reduction in operating expenditures from fiscal 2009 through fiscal 2012.

While audited results are not yet available for fiscal 2013, county officials estimate the General Fund closed the year with an additional operating surplus of at least $3 million. The county's fiscal 2014 budget was adopted with a very modest operating surplus of $200,000. The current year budget assumes 0% growth in taxable valuation, though preliminary estimates of the assessment office indicate valuations could increase as much as 1.5% once finalized in May. Further indication of strong fiscal management is the formal adoption of a two-year financial forecast to accompany the county's annual operating budget. While the current forecast for fiscal years 2015 and 2016 identifies moderate budget gaps, officials expect growth in taxable valuation beyond those conservatively projected, as well as further positive variances in annual expenditures, will support maintenance of balanced operations in the near term.

EXPOSURE TO UNFUNDED PENSION LIABILITIES LIKELY TO REMAIN MANAGEABLE

The Macomb County Employees' Retirement System is a single employer defined benefit plan that provides pension benefits to current and future retirees. The total employer contribution to the system in fiscal 2012 was $16.6 million. Adjusting this figure for payments made by enterprise funds and the road commission results in a contribution of $11.9 million, which is equivalent to a moderate 6.6% of operating revenue. The county has negotiated with its labor unions to close the defined benefit plan to new hires effective January 1, 2016.

As of the December 31, 2011 actuarial valuation date, the system reported an unfunded liability of $25.6 million. Adjusting the assets and liabilities of the system according to the pro-rata employer contributions associated with enterprise fund and road commission employees, the reported unfunded liability declines to $18.3 million. The county's fiscal 2012 adjusted net pension liability (ANPL), under Moody's methodology for adjusting reported pension data, is $300.7 million. In the three years through fiscal 2012, the ANPL averaged a manageable 0.9 times annual operating revenue and 0.3% of full valuation.

MODEST NET DEBT PROFILE

The county's direct debt burden is a modest 0.1% of full valuation and 0.2 times operating revenue. This figure is net of outstanding bonds that have been issued for local drainage improvement projects and are expected to be repaid, per contractual obligation, by the benefiting municipalities. Inclusive of these bonds, the county's gross direct debt burden is moderate at 0.7% of full valuation and 1.7 times operating revenue. Debt service comprised a manageable 4.4% of operating expenditures in fiscal 2012. The county has no variable rate or short-term debt outstanding.

OUTLOOK

The stable outlook reflects the expectation that, despite historic and ongoing ties to the automotive sector and the associated potential for future economic challenges, the county will maintain its very strong credit quality given the health of financial reserves and a commitment to prudent fiscal management.

WHAT COULD MOVE THE RATING UP

- Sustained trend of tax base growth

- Improvement in socioeconomic indicators, such as unemployment rate and resident income levels

- Further diversification of the regional economy

WHAT COULD MOVE THE RATING DOWN

- Renewed tax base depreciation

- Onset of new economic challenges indicated by an increased unemployment rate or depressed resident incomes

- Material narrowing of the county's financial position

KEY STATISTICS

2010 census population: 840,978 (6.7% increase since 2000)

2013 full valuation: $51.7 billion (6.6% five-year average annual decline)

Estimated full valuation per capita: $61,450

Estimated median family income as a % of the US: 107%

Fiscal 2012 available fund balance (General Fund and DTRF): $197.8 million (98.6% of operating revenue)

5-year change in available fund balance: 34% of operating revenue

Fiscal 2012 cash balance (General Fund and DTRF): $138.1 million (68.8% of operating revenue)

5-year change in cash balance: 23% of operating revenue

5-year average ratio of operating revenue to expenditures: 1.05x

Net direct debt burden: 0.1% of full valuation; 0.2x operating revenue

3-year average Moody's adjusted net pension liability: 0.3% of full valuation; 0.9x operating revenue

RATING METHODOLOGY

The principal methodology used in this rating was US Local Government General Obligation Debt published in January 2014. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

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2014 MACOMB COUNTY INTERMEDIATE RETIREES

MEDICAL BENEFITS TRUST AGREEMENT

This Trust Agreement is made, effective as of this ____ day of _________________, 2014, by and between the County of Macomb, Michigan (the "**County**" or the "**Grantor**") and the Trustees described in Section 2 below, or their successors. The word "Section" means a section of this Trust Agreement. Capitalized terms are either defined herein or referenced in underlying documents.

R E C I T A L S:

WHEREAS, the County currently provides medical benefits to eligible retirees and their eligible dependents in accordance with the Macomb County Retiree Health Care Plan and other health programs (collectively, the "**Retiree Medical Benefits**"); and

WHEREAS, the County established the Macomb County Retiree Health Care Fund by adoption of the Trust Agreement Resolution for the Macomb County Retiree Health Care Fund ("**Health Care Fund**"), which was intended to (i) comply with the Public Employee Retirement Health Care Fund Investment Act, Public Act 1999, No. 149, (ii) satisfy the requirements of Statements No. 43 and 45 of the Governmental Standards Accounting Board ("**GASB**"), and (iii) be administered as a tax-exempt trust under Section 115 of the Internal Revenue Code of 1986, as amended ("**Code**"); and

WHEREAS, the County desires to establish this Intermediate Trust ("**Intermediate Trust**"), which shall be an irrevocable grantor trust and integral part of the County, to irrevocably receive and hold in trust a certain amount of the net proceeds (the "**Funding Proceeds**") from the sale by the County of its Retiree Health Care Bonds, Series 2014 (Taxable Obligations) (the "**Bonds**") and to hold, invest and distribute the Intermediate Trust assets, all in accordance with this Trust Agreement, as it may be amended in accordance with its terms (the "**Trust Agreement**"); and

WHEREAS, thereafter on ________________________ the Macomb County Board of Commissioners approved a resolution authorizing the adoption of this Trust Agreement.

NOW, THEREFORE, the County and the Intermediate Trustees agree as follows:

1. **Establishment and Name of the Intermediate Trust.**

(a) The County, as Grantor, hereby establishes, and the Intermediate Trustees hereby accept, the Intermediate Trust, which shall be known as the 2014 Macomb County Intermediate Retirees Medical Benefits Trust, for the purpose of assisting the County to fulfill its contractual obligations to provide Retiree Medical Benefits by establishing an alternative funding mechanism and not to look to the County for contributions therefor, except as may be needed in any given year over and above distributions from the Intermediate Trust and the Intermediate Trustees shall receive, hold, invest, administer and make distributions from the Intermediate Trust only in accordance with the provisions of this Trust Agreement.

(b) The Intermediate Trust is intended to be a trust governed by Subpart E of Part I of Subchapter J of Chapter 1 of the Code, and the Treasury Department regulations promulgated thereunder, under which the County is treated as the owner of the Intermediate Trust for U.S. federal income tax purposes (the "**Grantor Trust**"). The income accruing to the Intermediate Trust shall be excluded from income for tax purposes, as such trust income accrues to an entity the income of which is excluded from taxation under Code Section 115 and such income is derived from the exercise of an essential governmental function.

2. **Trustees.** The provisions of this Section 2 shall govern the identification and appointment of initial Intermediate Trustees, the appointment of successor Intermediate Trustees, the resignation of Intermediate Trustees, and the duties of successor Intermediate Trustees as to the Intermediate Trust. The term "**Intermediate Trustees**" means all persons or entities who occupy the office of Intermediate Trustee under this Trust Agreement, while such persons or entities occupy such office, whether one or more persons or entities occupy the office of Intermediate Trustees at the same time or times, and includes any successor Intermediate Trustee or Trustees.

(a) The Intermediate Trustees shall be Macomb County Executive (or their designee), the Chairman of the Macomb County Board of Commissioners (or their designee), the Macomb County Treasurer (or their designee), the Macomb County Finance Director, one member appointed by the Macomb County Executive and one member appointed by the Board of Commissioners.

(b) Appointed trustees may be removed at the sole discretion of the appointing authority.

(c) The term of office of each of the appointed Intermediate Trustees shall be until otherwise removed or replaced.

(d) If, for any reason, all of the Intermediate Trustees under this Trust Agreement die or cannot or will not act as Intermediate Trustees under this Trust Agreement, and if no successor Intermediate Trustees are designated under this Section 2, or are designated but unwilling to act as Intermediate Trustees, then successor Intermediate Trustees shall be named by order of a court of competent jurisdiction.

(e) The appointment of a successor Intermediate Trustee shall be effective when such Intermediate Trustee signs an acceptance of trust. Notice of the acceptance of trust shall be given to the County.

(f) Each successor Intermediate Trustee shall have the identical powers, rights, duties and obligations of the initial Intermediate Trustees named in this Trust Agreement.

3. **Contributions to the Intermediate Trust.** The County, as Grantor, shall cause the Funding Proceeds to be irrevocably transferred to the Intermediate Trustees on the date of delivery of the Bonds to the initial purchasers thereof. The Intermediate Trustees shall receive such contributions made to them on behalf of the County and shall hold such funds as a separate trust designated as the Intermediate Trust, and shall hold and administer such funds, invest and reinvest such funds, and make distributions from such funds only in accordance with the provisions of this Trust Agreement. The Intermediate Trustees shall receive, hold, invest and administer as part of the Intermediate Trust, subject to the terms of this Trust Agreement, all income earned by the corpus of the Intermediate Trust held by the Intermediate Trustees (and all losses in the value of the corpus of the Intermediate Trust shall be charged to the corpus of the Intermediate Trust). The County, in its sole and absolute discretion, may cause additional funds to be transferred or contributed to the Intermediate Trust, and such funds, if any, shall be subject to the terms of this Trust Agreement.

4. **Permitted Uses of Assets of the Intermediate Trust.**

(a) No part of the Intermediate Trust's corpus or income shall be used for, or diverted to, purposes other than (i) to be distributed to the Health Care Fund in accordance with the terms of this Trust Agreement for the payment of Retiree Medical Benefits and administrative costs related thereto, and (ii) to pay the reasonable administrative expenses of the Intermediate Trust. Notwithstanding any provision of this Trust Agreement to the contrary, if the Health Care Fund is determined by its actuary to be greater than one hundred percent (100%) funded, the County may direct the Trustees to use surplus funds to (w) call or redeem all or a portion of the outstanding Bonds, (x) fund the Macomb County Employees' Retirement System Defined Benefit Pension Plan, (y) fund a defined contribution pension fund to be created by Macomb County, and/or (z) pay other retiree health benefits; provided however, the surplus funds may only be used to call or redeem all or a portion of the outstanding Bonds only after the County obtains an opinion from outside legal counsel or a favorable determination from the Internal Revenue Service that such payments would not jeopardize the Intermediate Trust's Code Section 115 status.

(b) No participants (or their eligible beneficiaries) in a County-sponsored retiree medical plan or any other County employee shall have a preferred claim on, or any beneficial ownership interest in, any Intermediate Trust assets.

5. **Powers and Duties of Intermediate Trustees.**

(a) Immediately upon receipt by the Intermediate Trust of the proceeds of the sale of the Bonds net of the payment of the Costs of Issuance of the Bonds, the Intermediate Trustees shall issue a notice to all applicable parties that such funds have been received.

(b) The Intermediate Trustees shall have the entire care and custody of all assets of the Intermediate Trust. The Intermediate Trustees shall have the power to do everything permitted under this Trust Agreement, which the Intermediate Trustees in good faith deem advisable and in accordance with applicable law, without necessity of any judicial authorization or approval.

(c) If more than two (2) Intermediate Trustees are empowered to participate in the decision to exercise or not exercise any fiduciary power granted by this Trust Agreement or by law, a majority of such Intermediate Trustees shall be empowered to make such decision. If two (2) Intermediate Trustees are empowered to participate in the decision to exercise or not exercise any fiduciary power granted by this Trust Agreement, then such Intermediate Trustees shall make such decisions unanimously. The powers of the Intermediate Trustees under this Trust Agreement shall be in addition to those powers granted to a Trustee by law and may be exercised even after termination of the Intermediate Trust under this Trust Agreement until actual distribution of all Intermediate Trust assets.

(d) The Intermediate Trustees shall make distributions from the Intermediate Trust's assets to the Health Care Fund. These distributions shall be made only pursuant to a written request by the Administrator of the Macomb County Retiree Health Care Board of Trustees and shall be made no less frequently than once per calendar year. Distributions may be made more frequently than once a year, but in no case shall the aggregate amount distributed to the Health Care Fund in any calendar-year exceed the annual required contribution for that year, as determined by Health Care Fund's actuary. Distributions pursuant to this Section 5(d) shall be made from the income of the Intermediate Trust and, to the extent that the income is insufficient, from the corpus of the Intermediate Trust.

(e) The Macomb County Finance Director, acting on behalf of the Intermediate Trustees, shall keep accurate, detailed records of all Intermediate Trust investments, receipts, distributions and other transactions, including such specific records as shall be agreed upon in writing among the County, the Health Trustees and the Intermediate Trustees. Within one hundred twenty (120) days following the close of each County fiscal year (January 1 –December 31), the Intermediate Trustees shall deliver to the County and the Health Trustees a written account of their administration of the Intermediate Trust during such fiscal year setting forth all investments, receipts, distributions and other transactions concerning the Intermediate Trust.

(f) The Intermediate Trustees shall not be liable for any action pursuant to a direction, request or approval given by the County or the Health Trustees which is contemplated by, and in conformity with, the terms of this Trust Agreement and given in writing to the Intermediate Trustees by the County or the Health Trustees.

(g) If the Intermediate Trustees undertake or defend any litigation arising in connection with the Intermediate Trust, the County, to the extent permitted by applicable law, agrees to indemnify the Intermediate Trustees against their actual costs, expenses and liabilities (including, without limitation, reasonable and actual attorneys' fees and expenses incurred) relating thereto and to be primarily liable for such payments; provided however, that the County shall not indemnify the Intermediate Trustees for any litigation arising from any Intermediate Trustee's actions that are determined by a court of competent jurisdiction to be fraudulent, in bad faith, illegal or grossly negligent.

(h) Except as otherwise provided in this Trust Agreement, the Intermediate Trustees shall invest and reinvest the assets of the Intermediate Trust subject to the terms, conditions, limitations and restrictions imposed by the State of Michigan on the investments of public employee retirement systems by 1965 P.A. 314, MCL §§38.1132 et seq., the Public Employees Retirement System Investment Act, as now or hereafter amended, made applicable to public employee health care funds through 1999 P.A. 149, MCL. §§38.1211 et seq., the Public Employee Health Care Fund Investment Act, as now or hereafter amended, and specifically, MCL §38.1214. In exercising their discretionary authority as to the management of the Trust Fund, the Intermediate Trustees shall be investment fiduciaries and shall exercise the care, skill, prudence and diligence under circumstances then prevailing, that a prudent person, acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims, as further described in MCL §38.1133(3), and shall not engage in transactions prohibited by law and as described in MCL §§38.1133(6) and (9). This shall include diversifying the assets of the Intermediate Trust so as to minimize the risk of large losses, unless under the circumstances it appears prudent not to do so. This standard shall not be applied to investments in isolation, but rather in the context of the Intermediate Trust's overall portfolio and as part of the overall investment strategy, which shall incorporate risk and return objectives reasonably suited to the purposes of the Intermediate Trust. Subject to the foregoing, the Intermediate Trustees shall have the following rights, powers and duties with respect to the assets of the Intermediate Trust (the "**Trust Fund**"):

i. to retain, manage, improve, repair, operate and control all property, real or personal, at any time comprising part of the Trust Fund;

ii. to manage, sell, contract to sell, grant options to purchase, convey, exchange, partition, lease for any term (even though such term commences in the future or may extend beyond the duration of the Intermediate Trust), and otherwise dispose of the Trust Fund from time to time and in such manner, for such consideration, and upon such terms and conditions as the Intermediate Trustees in their discretion shall determine;

iii. to retain all or any part of the Trust Fund (without regard to the proportion that any one (1) asset or class of assets may bear to the whole) in the form in which such assets were received or acquired by the Intermediate Trustees;

iv. to hold all or part of the Trust Fund in cash or in bank accounts without the necessity of investing the same;

v. to vote any corporate stock either in person or by proxy for any purpose; to exercise or sell any stock subscription or conversion right; to participate in voting trusts; to consent to, take any action in connection with, and receive and retain any securities resulting from, any merger, consolidation, reorganization, readjustment of the financial structure, liquidation, sale, lease or other organization the securities of which may constitute a portion of the Trust Fund;

vi. to keep property in the name of a nominee with or without disclosure of any fiduciary relationship; to have evidence of ownership of any security maintained in the records of a Federal Reserve Bank under the Federal Reserve Book Entry System; to deposit funds in any bank or trust company; to carry in the name of the Intermediate Trustees or the nominee or nominees of the Intermediate Trustees and with or without the designation of fiduciary capacity, or to hold in bearer form, securities or other property which are required or permitted to be registered; and to cause any securities to be held by a depository corporation of which an Intermediate Trustee shall be a member or by an agent under a safekeeping contract; provided, however, that the books and records of the Intermediate Trustee shall at all times show that such investments are part of the Trust Fund;

vii. to loan all or any part of the Trust Fund at any time and upon such terms as to payment security or otherwise; to assume such obligations or to give such guarantees; to borrow money, and to lease, mortgage, pledge, grant a security interest in, or otherwise encumber the Trust Fund or any part thereof, as the Intermediate Trustees determine;

viii. to take any action with respect to conserving or realizing upon the value of any property in the Trust Fund; to collect, pay, contest, compromise or abandon demands of or against the Trust Fund;

ix. to litigate, defend, compromise, settle, abandon, or submit to arbitration on such terms as the Intermediate Trustees determine, any claims in favor of or against the Intermediate Trust or the Trust Fund;

x. to employ such agents, experts, investment fiduciaries, counsel and other persons (any of whom may also be employed or represent the County) deemed by the Intermediate Trustees to be necessary or proper for the administration of the Intermediate Trust; to rely and act on information and advice furnished by such agents, experts, investment fiduciaries, counsel, and other persons; and to pay their reasonable expenses and compensation for services to the Intermediate Trust from the Trust Fund;

xi. to transfer to an investment fiduciary (as defined in MCL §38.1132c(1)) the authority and accompanying duty to direct the investment and management of all or a portion of the Trust Fund, provided that such an investment fiduciary shall acknowledge in writing fiduciary status with respect to the Trust Fund; and

xii. to make, execute, and deliver any and all such instruments in writing as shall be necessary or proper to carry out any power, right, duty or obligation of the Intermediate Trustees or any disposition whatsoever of the Trust Fund and to perform any and all acts which in the judgment of the Intermediate Trustees are necessary or desirable for the proper and advantageous administration and distribution of the Trust Fund.

(i) Notwithstanding any provision of this Trust Agreement to the contrary, the Intermediate Trustees, in accordance with applicable law, may adopt a group trust (as such is described in Revenue Ruling 81-100).

6. **Compensation and Expenses.**

(a) The Intermediate Trustees shall not be compensated for their services as Intermediate Trustees hereunder. The Intermediate Trustees shall be reimbursed for all reasonable costs, expenses, charges and liabilities incurred or paid in connection with the performance of their duties administering the Intermediate Trust, including fees and expenses of counsel or any other agents hired by the Intermediate Trustees, and the Intermediate Trustees shall not be liable therefore individually. The Intermediate Trustees have discretion to pay such expenses or be reimbursed for such expenses from the Trust Fund, without obtaining judicial authorization or approval.

(b) Notwithstanding any provision in this Trust Agreement to the contrary, no Intermediate Trustee shall be entitled to any fees or expenses claimed to be owing because such Intermediate Trustee is resigning, being removed, or is no longer serving as an Intermediate Trustee for any reason; provided, however, that any Intermediate Trustee shall be eligible to receive all pension and any other retiree benefits to which he or she is entitled by virtue of their employment by the County.

(c) To the extent the Trust Fund proves insufficient or the Intermediate Trustees determine that the payment of administrative expenses for a given period would inhibit the distribution of amounts to the Health Care Fund, the reasonable costs, expenses, charges and liabilities incurred or paid in connection with administering the Intermediate Trust shall be paid by the County.

7. **Amendment or Termination of the Intermediate Trust.** This Trust Agreement and the Intermediate Trust are irrevocable.

(a) The County, in its sole and absolute discretion and in accordance with Michigan law, GASB Statements 43 and 45, and Code Section 115, may amend this Trust Agreement upon written notice to the Intermediate Trustees.

(b) The Intermediate Trust, though irrevocable, may be terminated by the County, but only in the following limited circumstances:

i. At the option of the County, the Intermediate Trust's assets may be distributed to the Health Care Fund.

ii. If the Intermediate Trust no longer has any assets, the Intermediate Trust shall be terminated.

In no event will the Intermediate Trust assets be distributed to or revert to any entity that is not a state, a political division of the state, or an entity whose income is excluded from gross income under Code Section 115.

8. **Applicable Law**. This Trust Agreement shall be construed under the laws of the State of Michigan. Any provision of this Trust Agreement prohibited by law shall be ineffective to the extent of any such prohibition, without invalidating the remaining provisions of this Trust Agreement.

9. **Rights of Participants.** The County's participation in regard to the Intermediate Trust shall not give any retiree (or his or her eligible beneficiaries) entitled to medical benefits under a County-sponsored retiree medical plan, any right or claim to any benefit or asset under any plan sponsored by the County beyond what they are entitled to under the terms of such plan.

10. **Third Party Reliance.** Third parties may rely on the representation of the Intermediate Trustees relating to any authority granted to them under this Trust Agreement, and such third parties shall not be obligated to inquire whether such Intermediate Trustees may act or are properly exercising such powers, and are not bound to assure the proper application of assets paid or delivered to such Intermediate Trustee; provided, however, that this Section 10 shall not apply to any person who claims to be, but is not, an Intermediate Trustee pursuant to this Trust Agreement.

11. **Addresses for Notices.** All notices and other communications provided for hereunder shall be in writing and, unless otherwise stated herein, mailed, sent or delivered to the County, the Intermediate Trust or the Intermediate Trustees or the Health Care Fund or the Health Trustees at c/o Finance Department, 120 N. Main Street, Second Floor, Mount Clemens, Michigan 48043, or to such other address as such person may specify to the other person and shall be effective (i) if given by mail, three (3) business days after such communication is deposited in the mail with first class postage prepaid, or (ii) if given by any other means, when delivered at the address specified in or pursuant to this Section.

12. **Agreement by Health Trustees.** The Health Trustees agree that the Intermediate Trust shall fund the Health Care Trust, subject to Section 5(d), and that the Health Trustees shall not look to the County for contributions for the Health Care Fund.

13. **Tax Status of the Intermediate Trust; Opinions of Counsel or Internal Revenue Service Ruling.**

(a) Unless the County receives an opinion of counsel experienced in such matters that:

i. the Intermediate Trust will be treated as a grantor trust under Subpart E, Part I of Subchapter J of Chapter 1 of the Code which is treated as wholly owned by the County for U.S. federal income tax purposes, and, accordingly the Intermediate Trust will not be subject to U.S. federal income tax, and/or

ii. the income of the Intermediate Trust from the transactions contemplated by this Trust Agreement will constitute gross income described in Section 115 of the Code, such that the Intermediate Trust will not be subject to U.S. federal income tax in respect of any income derived from the transactions contemplated by this Trust Agreement, and/or

iii. the Intermediate Trust is treated as an integral part of the County such that the Intermediate Trust will not be subject to U.S. federal income tax in respect of any income derived from the transactions contemplated by this Trust Agreement,

then, and in such event, the County shall submit the Intermediate Trust to the Internal Revenue Service for one (1) or more private letter rulings or other administrative determinations that: (A) the Intermediate

Trust will be treated as a grantor trust under Subpart E, Part I of Subchapter J of Chapter 1 of the Code which is treated as wholly owned by the County for U.S. federal income tax purposes, and, accordingly the Intermediate Trust will not be subject to U.S. federal income tax, (B) the income of the Intermediate Trust from the transactions contemplated by this Trust Agreement will constitute gross income described in Section 115 of the Code, such that the Intermediate Trust will not be subject to U.S. federal income tax in respect of any income derived from the transactions contemplated by this Trust Agreement, and/or (C) the Intermediate Trust is treated as an integral part of the County such that the Intermediate Trust will not be subject to U.S. federal income tax in respect of any income derived from the transactions contemplated by this Trust Agreement. References to any "tax" shall also include any interest or penalties thereon.

(b) Notwithstanding any other provision of this Trust Agreement to the contrary, in the event the County submits the Intermediate Trust to the Internal Revenue Service for one (1) or more private letter rulings or other administrative determinations in accordance with this Section, and the Internal Revenue Service does not provide a favorable private letter ruling or other administrative determination (or, in the County's sole and absolute discretion, the Internal Revenue Service conditions the favorable determination(s) on significant modification(s) unacceptable to the County), then the assets of the Intermediate Trust shall promptly be distributed by the Intermediate Trustees to the Health Care Trust, to be held in a segregated account within the Health Care Trust, and the Intermediate Trust and this Trust Agreement shall terminate.

(c) If the County receives a favorable Internal Revenue Service private letter ruling or other administrative determination, the Intermediate Trust will be operated in accordance with its terms.

14. **Spendthrift Provision.** The Intermediate Trustees are hereby vested with full and complete equitable and legal title to all of the property which becomes subject to the terms of this Trust Agreement, until the termination of this Trust Agreement and until the entire Trust Fund's assets shall have been distributed as otherwise provided herein. No person who is a beneficiary of this Intermediate Trust or an employee benefit that will be funded by this Intermediate Trust, or to the income therefrom, shall take or have any title or interest in such Intermediate Trust, or income, until the same shall be actually received by such person. No disposition, charge or encumbrance by way of anticipation of such Intermediate Trust or income, or any part thereof, by any beneficiary hereunder shall be of any validity or legal effect, or be in any way regarded by Intermediate Trustees.

15. **Action by County.** Wherever in this Trust Agreement the County is required or permitted to take action, such action shall be taken by a resolution adopted by the Macomb County Board of Commissioners.

[The next page is a signature page)

IN WITNESS WHEREOF, the County and the Trustees have caused this Trust Agreement, which constitutes an irrevocable grantor trust agreement, to be executed effective as of the date first written above.

THE COUNTY OF MACOMB, MICHIGAN

By:____
Its:

TRUSTEES OF THE 2014 MACOMB COUNTY INTERMEDIATE RETIREES MEDICAL BENEFITS TRUST

By:____

We acknowledge reading the above Trust Agreement, and we agree to the provisions in it on the part of the Health Care Trust and the Health Trustees (as such terms are defined above), effective as of the date first written above.

TRUSTEES OF THE ________________________ HEALTH CARE TRUST:

By:____

22905654.8\054931-00008

TRUSTEES' ACCEPTANCES

2014 MACOMB COUNTY INTERMEDIATE RETIREES MEDICAL BENEFITS TRUST AGREEMENT

We, the undersigned, each accept the appointment as a Trustee of the 2014 Macomb County Intermediate Retirees Medical Benefits Trust Agreement (a copy of which is attached hereto), as such was approved by the Macomb County Board of Commissioners in Misc. Resolution No. _________ on _________________________, 2014.

IN WITNESS WHEREOF, we have each executed this Acceptance on ____________________, 2014.

COUNTY OF MACOMB

At a _______________ meeting of the Board of Commissioners of the County of Macomb, Michigan, held on the ___ day of _________________, 2014, at __:__ _.m., Eastern Daylight Savings Time, at the County _____________________ Building in Mt. Clemens, Michigan there were:

PRESENT: ____

____

ABSENT: ____

The following preambles and resolution were offered by _____________________________ and seconded by _____________________________:

BOND RESOLUTION AUTHORIZING THE COUNTY OF MACOMB TO ISSUE THE COUNTY OF MACOMB RETIREES HEALTH CARE BONDS, SERIES 2014 (GENERAL OBLIGATION LIMITED TAX)

WHEREAS the County of Macomb, Michigan (the "County") currently provides health care benefits to qualified retirees and/or their spouses and dependents, as provided by the Macomb County and its policies; and

WHEREAS, an amendment to Public Act No. 34 of the Public Acts of 2001, as amended ("Act 34") enacted in October of 2012 permits the County to issue Bonds for the purpose of providing funds to fund the unfunded portion of the County's retirees health care obligations which are described in Appendix A (the "Project"); and

WHEREAS, it has been estimated that the Project will extend for approximately 25 years and that the cost of the Project and issuing the Bonds will not exceed $300,000,000 to be provided by the proceeds from the sale of Bonds by the County pursuant to Act 34; and

WHEREAS, the Macomb County Finance Director (the "Finance Director") will, before the County issues any series of the Bonds, prepare and make available to the public a comprehensive plan which will include all of the requirements set forth in Section 518 subsection (4) of Act 34; and

WHEREAS, the County proposes to approve the Project and to incur new taxable debt to finance a portion of the costs of the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE COUNTY OF MACOMB, MICHIGAN, AS FOLLOWS:

1. **Bond Details**: Pursuant to Section 518 of Act 34, the Bonds of the County, aggregating not to exceed the principal sum of $300,000,000 shall be issued in one or more series for the purpose of defraying the County's portion of the cost of the Project. The Bonds shall be known as "County of Macomb Retirees Health Care Bonds, Series 2014 [and if more than one series is issued the additional series shall be designated by the date 2014 and the letter of the alphabet starting with "A"] (General Obligation Limited Tax)" (the "Bonds") and shall be dated October 1, 2014 or such later date not more than eighteen calendar months thereafter as the Finance Director or his designee shall provide by order. If the Bonds are delivered in 2014 the series shall reflect that year. The Bonds shall be fully registered Bonds, both as to principal and interest, in any one or more denominations of $5,000 or a multiple of $5,000 numbered from 1 upwards as determined by the Finance Director, regardless of rate and maturity date. The Bonds of each series shall mature as directed by the Finance Director or his designee in his signed order.

The maximum amount of Bonds in one or more series shall not exceed the amount necessary for the County to complete the Project.

The Bonds shall be in substantially the form attached hereto as EXHIBIT A with such changes, additions, or deletions as are not inconsistent with this resolution.

2. **Discount**: The Bonds may be offered for sale at a price of not less than 99% or more than 101% of the face amount thereof.

3. **Interest Payment and Date of Record**: The Bonds shall bear interest payable as set forth in the order signed by the Finance Director in accordance with paragraph 1 of this resolution, which interest shall not exceed 6% per annum. Interest shall be paid by check or draft mailed to the registered owner of each Bond as of the applicable date of record, provided, however, that the County Treasurer may agree with the bond registrar on a different method of payment. If interest is paid differently, the Bond form attached as EXHIBIT A shall be changed accordingly.

The date of record for each interest payment shall be the 15th day of the calendar month preceding the date such payment is due.

4. **Prior Redemption**: The Bonds shall be subject to redemption prior to maturity upon such terms and conditions as shall be determined by order signed by the Finance Director at the time of sale.

5. **Reduction in Aggregate Amount of Bonds**: In the event the cost of the Project and of issuing the Bonds shall be less than the current projections and after this bond resolution has been adopted it shall be determined by the Finance Director that the Project cost shall be less than such estimates, the Finance Director shall reduce the principal amount of the Bonds by $5,000 denominations, one such denomination for each maturity in any order of maturity, to the extent required to avoid the issuance of more Bonds than will be required in light of the bids received, and the Notice of Sale shall be correspondingly altered.

6. **County Covenant with Bondholders:** The County hereby covenants with the bondholders and the state of Michigan that it will not, after the issuance of the Bonds and while the Bonds are outstanding, rescind the action which it has already taken to close the County's Retiree Health Care VEBA Trust to all new employees effective January 1, 2016.

7. **Bond Registrar and Paying Agent/Book Entry Depository Trust**: The County shall enter into an agreement with Huntington National Bank, to serve as bond registrar and paying agent for the Bonds (sometimes referred to as the "Bond Registrar") which is a bank located in the State of Michigan which is qualified to act in such capacity under the laws of the United States of America or the State of Michigan. The County Finance Director from time to time as required may designate a similarly qualified trustee, bond registrar and paying agent. The Bonds shall be deposited with The Depositary Trust Company, New York, N.Y. who shall transfer ownership of interests in the Bonds by book entry and who shall issue depository trust receipts or acknowledgments to owners of interests in the Bonds. Such book entry depository trust arrangement, and the form of depository trust receipts or acknowledgments, shall be as determined by the County Finance Director after consultation with the depository trustee.

8. **Transfer or Exchange of Bonds**: Any bond shall be transferable on the bond register maintained by the Bond Registrar with respect to the Bonds upon the surrender of the Bond to the Bond Registrar together with an assignment executed by the registered owner or his or her duly authorized attorney in form satisfactory to the Bond Registrar. Upon receipt of a properly assigned Bond the Bond Registrar shall authenticate and deliver a new Bond or Bonds in equal aggregate principal amount and like interest rate and maturity to the designated transferee or transferees.

Bonds may likewise be exchanged for one or more other Bonds with the same interest rate and maturity in authorized denominations aggregating the same principal amount as the Bond or Bonds being exchanged. Such exchange shall be effected by surrender of the Bond to be exchanged to the Bond Registrar with written instructions signed by the registered owner of the Bond or his or her attorney in form satisfactory to the Bond

Registrar. Upon receipt of a Bond with proper written instructions the Bond Registrar shall authenticate and deliver a new Bond or Bonds to the registered owner of the Bond or his or her properly designated transferee or transferees or attorney.

Any service charge made by the Bond Registrar for any such registration, transfer or exchange shall be paid for by the County, unless otherwise agreed by the County and the Bond Registrar. The Bond Registrar may, however, require payment by a bondholder of a sum sufficient to cover any tax or other governmental charge payable in connection with any such registration, transfer or exchange.

9. **Mutilated, Lost, Stolen or Destroyed Bonds**: In the event any Bond is mutilated, lost, stolen or destroyed, the Chairperson of the Board of Commissioners and the Clerk of the County may, on behalf of the County, execute and deliver, a new Bond having a number not then outstanding, of like date, maturity and denomination as that mutilated, lost, stolen or destroyed.

In the case of a mutilated Bond, a replacement Bond shall not be delivered unless and until such mutilated Bond is surrendered to the Bond Registrar. In the case of a lost, stolen or destroyed Bond, a replacement Bond shall not be delivered unless and until the County and the Bond Registrar shall have received such proof of ownership and loss and indemnity as they determine to be sufficient, which shall consist at least of (i) a lost instrument Bond for principal and interest remaining unpaid on the lost, stolen or destroyed Bond; (ii) an affidavit of the registered owner (or his or her attorney) setting forth ownership of the Bond lost, stolen or destroyed and the circumstances under which it was lost, stolen or destroyed; (iii) the agreement of the owner of the Bond (or his or her attorney) to fully indemnify the County and the Bond Registrar against loss due to the lost, stolen or destroyed Bond and the issuance of any replacement Bond; and (iv) the agreement of the owner of the Bond (or his or her attorney) to pay all expenses of the County and the Bond Registrar in connection with the replacement, including the transfer and exchange costs which otherwise would be paid by the County.

10. **Execution and Delivery**: The Chairperson of the Board of Commissioners and the Clerk of the County are hereby authorized and directed to execute the Bonds for and on behalf of the County by manually executing the same or by causing their facsimile signatures to be affixed. If facsimile signatures are used, the Bonds shall be authenticated by the Bond Registrar before delivery. The Bonds shall be sealed with the County's seal or a facsimile thereof shall be imprinted thereon. When so executed and (if facsimile signatures are used) authenticated, the Bonds shall be delivered to the Finance Director, who is hereby authorized and directed to deliver the Bonds to the purchaser upon receipt in full of the purchase price for the Bonds.

11. **Source of Repayment:** The County agrees to pledge for the repayment of the Bonds sufficient amounts of County taxes levied each year provided that the amount of taxes necessary to pay the principal and interest on the Bonds, together with the other taxes levied for the same year, shall not exceed the limit authorized by law. In addition, the Bonds shall be secured by the General Fund of the County and shall be known as "General Obligation Limited Tax Bonds."

12. **Principal and Interest Fund**: All monies set aside by the County toward the cost of the Project shall be kept by the County in a separate fund hereby established, to be known as the "Principal and Interest Fund." All moneys in the Principal and Interest Fund shall be kept in a separate depository account with one or more banks or trust companies where the principal of and interest on the Bonds are payable, and such moneys shall be used solely for the payment of the principal of and interest on the Bonds and expenses incidental thereto. All accrued interest and the premium, if any, received from the purchaser of the Bonds shall be deposited in the Principal and Interest Fund upon receipt.

13. **Project Fund**: There is hereby established a Project Fund and Principal and Interest Fund with the Trustee into which all proceeds of the borrowing shall be deposited, except the accrued interest on the Bonds and premium, if any, received from the purchaser of the Bonds and any capitalized interest. All moneys in the Project Fund shall be used solely for the payment in full of costs of the Project, including the costs of issuing the Bonds. Simultaneously with the transfer of bond proceeds into the Project Fund, sufficient moneys from bond proceeds shall be transferred to the Paying Agent and used to pay all of the costs of issuance for the Bonds including, but not limited to, financial costs, consultant fees, counsel fees, printing costs, application fees, rating fees and expenses and any other fees or costs incurred in connection with the financing. All such costs shall be authorized by the County Finance Director. At the time of delivery of any series of Bonds, the proceeds deposited with the Paying Agent who will distribute the amounts needed to carry out the Project to the 2014 Macomb County Intermediate Retirees Medical Benefits Trust to be established by resolution of the Board of Commissioners and pay the costs of issuance for any series of Bonds. Surplus moneys remaining in the Project Fund after completion of the Project and payment in full of the costs of the Project (or provision for such payment) shall be deposited in the Principal and Interest Fund.

14. **Investments**: Moneys in the Principal and Interest Fund and the Project Fund may be continuously invested and reinvested in the United States government obligations, obligations the principal of and interest on which are unconditionally guaranteed by the United States government which are permissible investments for surplus funds under Act No. 20 of the Public Acts of 1943, as amended. Such investments shall mature, or be subject to redemption at the option of the holder,

not later than (a) in the case of the Principal and Interest Fund, the dates moneys in such fund will be required to pay the principal of and interest on the Bonds, and (b) in the case of the Project Fund, the estimated dates when moneys in such fund will be required to pay costs of the Project. Obligations purchased as an investment of moneys in the Principal and Interest Fund or the Project Fund, as the case may be, shall be deemed at all times to be a part of such fund, and the interest accruing thereon and any profit realized from such investment shall be credited to such fund.

15. **Defeasance or Redemption of Bonds**: If at any time,

(a) the whole amount of the principal of and interest on all outstanding Bonds shall be paid, or

(b) (i) sufficient moneys, or Government Obligations (as defined in this Section) not callable prior to maturity, the principal of and interest on which when due and payable will provide sufficient moneys, to pay the whole amount of the principal of and premium, if any, and interest on all outstanding Bonds as and when due at maturity or upon redemption prior to maturity shall be deposited with and held by a trustee or an escrow agent for the purpose of paying the principal of and premium, if any, and interest on such Bonds as and when due, and (ii) in the case of redemption prior to maturity, all outstanding Bonds shall have been duly called for redemption (or irrevocable instructions to call such Bonds for redemption shall have been given)

then, at the time of the payment referred to in clause (a) of this Section or of the deposit referred to in clause (b) of this Section, the County shall be released from all further obligations under this resolution, and any moneys or other assets then held or pledged pursuant to this resolution for the purpose of paying the principal of and interest on the Bonds (other than the moneys deposited with and held by a trustee or an escrow agent as provided in clause (b) of this Section) shall be released from the conditions of this resolution, paid over to the County and considered excess proceeds of the Bonds. In the event moneys or Government Obligations shall be so deposited and held, the trustee or escrow agent holding such moneys or Government Obligations shall, within 30 days after such moneys or Government Obligations shall have been so deposited, cause a notice signed by it to be given to the registered holders thereof not more than sixty (60) days and nor less than forty-five (45) days prior to the redemption setting forth (x) the date or dates, if any, designated for the redemption of the Bonds, (y) a description of the moneys or Government Obligations so held by it and (z) that the County has been released from its obligations under this resolution. All moneys and Government Obligations so deposited and held shall be held in trust and applied only to the payment of the principal of and premium, if any, and interest on the Bonds at maturity or upon redemption prior to maturity, as the case may be, as provided in this Section.

The trustee or escrow agent referred to in this Section shall (a) be a bank or trust company permitted by law to offer and offering the required services, (b) be appointed by resolution of the County, and (c) at the time of its appointment and so long as it is serving as such, have at least $25,000,000 of capital and unimpaired surplus. The same bank or trust company may serve as trustee or escrow agent under this Section and as Bond Registrar so long as it is otherwise eligible to serve in each such capacity.

As used in this Section, the term "Government Obligations" means direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America.

16. **Filing with Municipal Finance Division**: The Chief Administrative Officer of the County is authorized and directed to:

(a) apply to the Municipal Finance Division of the Michigan Department of Treasury for approval of the sale of the Bonds;

(b) file with such application all required supporting material; and

(c) pay all fees required in connection therewith.

17. **Retention of Bond Counsel.** The firm Axe & Ecklund, P.C., attorneys of Grosse Pointe Farms, Michigan, is hereby retained to act as bond counsel for the County in connection with the issuance, sale and delivery of the Bonds.

18. **Retention of Financial Consultants.** Public Financial Management, Inc., Ann Arbor, Michigan, is hereby retained to act as Financial Advisor to the County in connection with the sale and delivery of the Bonds.

19. **Negotiated Sale of Bonds.**

(a) Based on the advice of the Financial Advisor, the County hereby determines to sell the Bonds at a negotiated sale instead of a competitive sale for the reason that a negotiated sale will permit the County to enter the market on short notice at a point in time which appears to be advantageous, and thereby possibly obtain a lower rate of interest on the Bonds.

(b) The County will sell the bonds to an underwriter at a negotiated sale to the underwriter designated by an order of the Finance Director substantially in the form attached hereto as Appendix B and the Finance Director is authorized to make such changes in and complete the blanks in both the Order and the Bond Purchase Agreement which is approved by the Order as may be necessary to complete the transaction.

20. **Award of the Bonds**. Once the Underwriter is selected, the Finance Director is authorized to award the Bonds to the Underwriter in accordance with his order.

21. **Approval of Expenditures.** The Finance Director or his designee shall have the authority to approve all expenditures relating to the Project.

22. **Comprehensive Health Care Plan**. Before the County issues any series of the Bonds, the Finance Director or his designee shall prepare and make available to the Public by filing in the office of the County Clerk and posting on the County's web-site all of the following:

(a) An analysis of the current and future obligations of the County with respect to each postemployment health care benefit program of the County.

(b) Evidence that the issuance of the municipal security together with other funds lawfully available will be sufficient to eliminate the unfunded accrued health care liability.

(c) A debt service amortization schedule and a description of actions required to satisfy the debt service amortization schedule.

(d) A certification by the person preparing the plan that the comprehensive financial plan is complete and accurate.

(e) If the proceeds of the borrowing are to be deposited in a health care trust fund, a plan in place from the County to mitigate the increase in health care costs and may include a wellness program that promotes the maintenance or improvements of healthy behaviors.

23. **Conflicting Resolutions**. All resolutions and parts of resolutions in conflict with the foregoing are hereby rescinded.

24. **Effective Date**. This Resolution shall become effective upon its adoption by the Macomb County Board of Commissioners.

A roll call vote on the foregoing resolution was then taken, and was as follows:

YES: ____

____

NO: ____

ABSTAIN: ____

The resolution was declared adopted.

STATE OF MICHIGAN)
)ss.
COUNTY OF MACOMB)

CERTIFICATION

The undersigned, being the Clerk of the County of Macomb, hereby certifies that the foregoing is a true and complete copy of a resolution duly adopted by the County of Macomb Board of Commissioners at its ____________ meeting held on the __________ day of _______________, 2014, at which meeting a quorum was present and remained throughout and that an original thereof is on file in the records of the County. I further certify that the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with Act No. 267, Public Acts of Michigan, 1976, as amended, and that minutes of such meeting were kept and will be or have been made available as required thereby.

____
COUNTY CLERK

DATED: ____________________, 2014

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EXHIBIT A

[FORM OF BOND]

UNITED STATES OF AMERICA - STATE OF MICHIGAN - COUNTY OF MACOMB

COUNTY OF MACOMB
RETIREES HEALTH CARE BOND, SERIES 20__
(GENERAL OBLIGATION LIMITED TAX)

No. ___

RATE	**MATURITY DATE**	**DATE OF ISSUANCE**	**CUSIP**
		__________ 1, ____	

==

REGISTERED OWNER:

PRINCIPAL AMOUNT:

==

FOR VALUE RECEIVED, the County of Macomb, (the "County"), State of Michigan, hereby acknowledges itself indebted and promises to pay (but only from the sources referred to herein) on the Maturity Date specified above, unless paid prior thereto as hereinafter provided, to the Registered Owner specified above, or its registered assigns, the Principal Amount specified above upon presentation and surrender of this Bond at the principal corporate trust office of ________________________, _______, Michigan, as paying agent and bond registrar (the "Bond Registrar"), together with interest thereon to the Registered Owner of this Bond, as shown on the books of the County maintained by the Bond Registrar, on the applicable date of record from the Date of Issuance specified above, or such later date through which interest has been paid, at the Rate per annum specified above, commencing _________ 1, ____, and semiannually thereafter on the first day of ________ and _______ in each year to and including the Maturity Date or earlier redemption of this Bond. The date of record for each payment of interest shall be the 15th day of the month preceding the date such payment is due. Interest is payable by check or draft mailed by the Bond Registrar to the Registered Owner at the address shown on the books of the County maintained by the Bond Registrar on the applicable date of record and shall be calculated on the basis of a 360-day year consisting of twelve (12) thirty (30) day months.

This Bond is one of a series of Bonds of like date and tenor except as to denomination, date of maturity and interest rate, numbered from 1 upwards, aggregating the principal sum of ____ Dollars ($_________), issued by the County, pursuant to and in full conformity with the Constitution and Statutes of the State of Michigan and especially Section 518 of Act No. 34, Public Acts of Michigan,

2001, as amended (the "Act"), for the purpose of ____
____
which is located in _________, Michigan (the "Project").

This Bond and the series of which this is one are payable as follows:____
____
which are hereby irrevocably pledged for the payment of the principal of, premium, if any, and interest on the Bonds. To secure payment of the principal of, premium, if any, and interest on the Bonds. The ____________________ pledged to the payment of the principal of, premium, if any, and interest on the Bonds shall be and remain subject to the statutory lien until the principal of, premium, if any, and interest on the Bonds have been paid in full. The limited tax full faith and credit of the County has been pledged for the making of such payments, and the County is obligated to levy ad valorem taxes in such amounts as shall be necessary for the making of such cash rental payments. HOWEVER, NO TAXES MAY BE LEVIED IN EXCESS OF CONSTITUTIONAL AND STATUTORY LIMITS. In addition, the Bonds shall be secured by the General Fund of the County and shall be known as “General Obligation Limited Tax Bonds.”

The County hereby covenants with the holders of the Bonds that so long as any of the Bonds remain outstanding and unpaid that it will not, after the issuance of the Bonds and while the Bonds are outstanding, rescind the action which it has already taken to close the County’s Retiree Health Care VEBA Trust to all new employees effective January 1, 2016.

{The Bond shall be subject to redemption prior to maturity upon such terms and conditions as shall be determined by the Finance Director at the time of sale.}

This Bond shall be transferable on the books of the County maintained by the Bond Registrar upon surrender of this Bond to the Bond Registrar together with an assignment executed by the Registered Owner or his or her duly authorized attorney in form satisfactory to the Bond Registrar. Upon receipt of a properly assigned bond, the Bond Registrar shall authenticate and deliver a new Bond or Bonds in authorized denominations in equal aggregate principal amount and like interest rate and maturity to the designated transferee or transferees.

This Bond may likewise be exchanged for one or more other Bonds with the same interest rate and maturity in authorized denominations aggregating the same principal amount as the Bond or Bonds being exchanged. Such exchange shall be effected by surrender of the Bond to be exchanged to the Bond Registrar with written instructions signed by the Registered Owner of the Bond or his or her attorney in form satisfactory to the Bond

Registrar. Upon receipt of a Bond with proper written instructions the Bond Registrar shall authenticate and deliver a new Bond or Bonds to the Registered Owner of the Bond or his or her properly designated transferee or transferees or attorney.

The Bond Registrar is not required to honor any transfer or exchange of Bonds during the fifteen (15) days preceding an interest payment date. Any service charge made by the Bond Registrar for any such registration, transfer or exchange shall be paid for by the County (subject, however, to reimbursement by the County pursuant to the Lease), unless otherwise agreed upon by the County and the Bond Registrar. The Bond Registrar may, however, require payment by a bondholder of a sum sufficient to cover any tax or other governmental charge payable in connection with any such registration, transfer or exchange.

This Bond shall not be valid or become obligatory for any purpose or be entitled to any security or benefit until the certificate of authentication hereon has been duly executed by the Bond Registrar, as authenticating agent.

It is hereby certified, recited and declared that all things, conditions and acts required to exist, happen and be performed precedent to and in connection with the issuance of this Bond and the other Bonds of this series, existed, have happened and have been performed in due time, form and manner as required by the Constitution and Statutes of the State of Michigan, and that the total indebtedness of the County, including this series of Bonds, does not exceed any constitutional or statutory limitation.

IN WITNESS WHEREOF, the County of Macomb, State of Michigan by its Board of Commissioners has caused this Bond to be executed in its name with the facsimile signatures of its Chairperson of the Board of Commissioners and its Clerk and has caused a facsimile of its seal to be affixed hereto, and has caused this Bond to be authenticated by the Bond Registrar, as the County's authenticating agent, all as of the Date of Issuance set forth above.

COUNTY OF MACOMB

By:

Chairperson of the Board of Commissioners

[SEAL]

By:

Clerk

DATE OF AUTHENTICATION:

BOND REGISTRAR'S CERTIFICATE OF AUTHENTICATION

This Bond is one of the series of Bonds designated "County of Macomb Retirees Health Care Bonds, Series 20__ (General Obligation Limited Tax)."

____
_______, Michigan
as Bond Registrar and Authenticating Agent

By:
Authorized Representative

CERTIFICATE

The above is a true copy of the legal opinion of Axe & Ecklund, P.C., a true copy of which was delivered on the date of delivery of the Bonds to which it relates.

BY:
Clerk

ASSIGNMENT

FOR VALUE RECEIVED, the undersigned hereby sells, assigns and transfers unto ______________________ this Bond and all rights hereunder and hereby irrevocably constitutes and appoints _____________________________ attorney to transfer this Bond on the books kept for registration thereof with full power of substitution in the premises.

Dated: _______________________________

Signature:

____
Notice: The signature(s) to this assignment must correspond with the name as it appears upon the face of this Bond in every particular, without alteration or enlargement or any change whatsoever.

Signature Guaranteed:

____
Signature(s) must be guaranteed by an eligible guarantor institution participating in a Securities Transfer Association recognized signature guarantee program.

The transfer agent will not effect transfer of this Bond unless the information concerning the transferee requested below is provided:

Name and Address: ________________________________

____

(Include information for all joint owners if bond is held by joint account)

PLEASE INSERT SOCIAL SECURITY NUMBER OR OTHER IDENTIFYING NUMBER OF TRANSFEREE

(Insert number for first named transferee if held by joint account)

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APPENDIX A

Project Description

The Project consists of a plan to fully fund what are currently partly un-funded long-term retiree health care obligations paid by the County on behalf of Macomb County employees who retire from County service and who have the adequate vesting and service benefit level requirements. The project will utilize an intermediate trust fund in conjunction with the Macomb County Voluntary Employee Beneficiary Association Trust which will result in significant savings to the County. Public Act No. 329 of the Public Acts of Michigan of 2012, which amends Public Act No. 34 of the Public Acts of Michigan of 2001 enables the County to issue general obligation limited tax bonds for this purpose.

Cost Estimates

Funds to Finance the Project & Financing Costs (Including Bond Discount, and Contingency)	**Not to exceed $300,000,000**
Maximum amount of Bonds to be issued:	**$300,000,000**
Maximum term of bond issue:	**30 years**

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APPENDIX B

FORM OF FINANCE DIRECTOR'S ORDER TO PERMIT COUNTY EXECUTIVE TO SIGN THE BOND PURCHASE AGREEMENT

Pursuant to paragraph 17(b) of the Bond Resolution, as amended, in connection with the County of Macomb Retirees Health Care Bonds, Series 2014.

Pursuant to _______, I as Finance Director of the County of Macomb have been authorized by the Macomb County Board of Commissioners to execute a Bond Purchase Agreement substantially in the form attached hereto as Appendix __ with ____________ to purchase $____________ of the captioned Bonds.

In witness whereof, I have executed this Order as of ______, 2014.

____

___________________,
Finance Director on Behalf
of the County of Macomb

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