

**Performance Audit:
Analysis of City Savings from Private Operation
and Maintenance of the Water System**

January 2003

**Office of the City Internal Auditor
City of Atlanta**



CITY OF ATLANTA

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January 21, 2003

Honorable Mayor and Members of City Council:

This report presents the results of an analysis of the City of Atlanta's savings under its agreement for private operation and maintenance of its water system. The City's Audit Committee has reviewed the report and now releases it to the Mayor, City Council, and the public in accordance with Article 2, Chapter 6 of the City Charter.

The analysis covers 1999 through 2001, the first three years of the City's agreement with United Water Services Unlimited Atlanta, LLC ("United Water-Atlanta"). The purpose of the audit was to determine whether the projected savings from contracting with a private operator were realized, and whether those projections were reasonable.

In 1997, consultants for the City projected that private operation of the water system could yield operating savings of \$52.9 million in the first three years. The projection appears to have been reasonable based on information available at the time. We estimate, however, that actual savings for the three-year period were \$29.4 million, slightly more than one-half of the originally projected amount. The primary reason for the difference is that the City reduced its operating costs and related administrative costs during the two years before the agreement with United Water-Atlanta went into effect. These savings should not be attributed to private operation.

The analysis in this report includes only the savings from reduced operating and administrative expenditures. It does not assess the overall economic impact of the agreement with United Water-Atlanta on the City's water and sewer funds. In that respect, it should be considered in conjunction with our recent performance audit of United Water-Atlanta's collection of water and sewer bills. That report concluded the company fell short of its collection requirements by \$23.7 million through August 2002. Further, this report does not include in its calculations requests from United Water-Atlanta for additional compensation that were not paid due to disputes existing between the City and United Water-Atlanta concerning entitlement to payment and which, if paid, would have decreased total savings achieved under the agreement.

While we make no recommendations in this report, we did identify an issue that needs further review. Since 1998, the water and sewer fund has made annual payments to the City's general fund in lieu of the property taxes and franchise fees paid by privately owned utilities. This payment, \$9.8 million a year in 1999 through 2001, has offset the operating savings for the three-year period. We will

consider additional audit work on the basis for this payment and its relationship to other charges to the water and sewer fund for administrative and indirect costs.

We appreciate the assistance of the Departments of Finance, Law, and Watershed Management (formerly the Department of Water) and the consulting firm of Brown and Caldwell during this project. The principal auditor on the project was Phillip R. Shaw, CPA.

A handwritten signature in cursive script that reads "W. Wayne Woody".

W. Wayne Woody
Chair, City Audit Committee

Leslie Ward
City Internal Auditor

Analysis of City Savings from Private Operation and Maintenance of the Water System

Table of Contents

Introduction

Audit Objectives	1
Scope and Methodology	1
Background.....	3

Findings

Summary.....	7
City Has Not Realized Projected Savings from Private Water Operation.....	8
Annual Savings Close to \$10 Million in First Three Years	8
City Reduced Water-Related Costs Before Agreement Began.....	9
United Water-Atlanta Appears to Overstate City Savings.....	10
Annual Payment to General Fund Needs Further Review.....	11
Payment Is Intended to Substitute for Utility Franchise Fee and Property Taxes	11
Rationale for Payment and Its Amount Need Further Review	12

Appendix

Department of Water and Related City Expenditures, 1996 – 2001	15
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List of Exhibits

1. City Payments to United Water-Atlanta, 1999 – 2001	4
2. Expenditures and Estimated Savings, 1999 – 2001.....	9
3. Three-Year Projected and Estimated Actual Savings.....	10

Introduction

This analysis of the City of Atlanta's savings under private operation and maintenance of its water system was conducted pursuant to Chapter 6 of the Atlanta City Charter, which establishes the City of Atlanta Audit Committee and the Office of the City Internal Auditor and outlines the City Internal Auditor's primary duties. The annual audit plan for 2002 included a performance audit of the City's agreement with United Water-Atlanta for operation and maintenance of the City's water system. The Audit Committee approved the specific scope of this audit in May 2002.

A performance audit is an objective, systematic examination of evidence to independently assess the performance of an organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making. Performance audits may include objectives designed to assess the extent to which the desired results or benefits of a program are being achieved.¹

Audit Objectives

This audit is the third of three planned audits of performance issues related to the City's agreement with United Water-Atlanta. It was designed to answer the following questions:

- Have projected savings from private operation and maintenance of the City's water system been realized?
- Were projected savings reasonable?

Scope and Methodology

This audit was conducted in accordance with generally accepted government auditing standards. The audit scope was limited to reviewing projected savings to the City from contracting out water operations, estimating actual costs during the first three years of the

¹ Comptroller General of the United States, *Government Auditing Standards*, Washington DC: U.S. Government Printing Office, 1994, p. 14-16.

agreement with United Water-Atlanta, and calculating the difference between the two to determine whether projected savings were realized. We also examined related issues as needed to address the audit objectives. The audit does not make projections of future costs or savings the City might expect for the duration of the agreement with United Water-Atlanta.²

The audit did not examine changes in the overall financial condition of the water and sewer fund; it examined estimated savings in expenditures only, not changes in revenue. In that respect, this audit should be considered in conjunction with our recent performance audit of United Water-Atlanta's collection of water and sewer bills, which concluded that the company fell short of its collection requirements by \$23.7 million through August 2002.

The audit examined City expenditures for water services from January 1996 through December 2001, to include three years before the agreement commenced as well as three years after commencement. The audit methods included:

- Reviewing previous consultant estimates of expected savings from private water system operation and the methods used to calculate those estimates
- Compiling and categorizing City water system operating and administrative expenditures for 1996 through 2001
- Compiling and categorizing City payments to United Water-Atlanta from 1999 through 2001
- Interviewing Department of Watershed Management and Department of Finance staff and City consultants about expenditure patterns, types of payments, and other factors that could affect savings estimates
- Applying inflation and other adjustments to actual expenditures to maintain comparability with previous savings estimates
- Reviewing research on savings from government contracting for water system operation and other services.

Government auditing standards require disclosure that privileged or confidential information was omitted from an audit report. No such information was omitted from this report.

² This report was not designed or intended to address current issues concerning defaults by United Water-Atlanta under the agreement.

Background

The City of Atlanta water system supplies over 100 million gallons of water daily to retail, residential, commercial, and industrial customers within the City and portions of Fulton County south of the Chattahoochee River, and on a wholesale basis to other municipalities that include Clayton and Fayette Counties and the Cities of Fairburn, Union City, and Hapeville. The area served is approximately 650 miles, with approximately 149,000 water meters, including about 134,000 residential meters.

City Agreement with United Water-Atlanta

The City and United Water-Atlanta entered into a 20-year agreement that commenced on January 1, 1999. United Water-Atlanta is responsible for providing uninterrupted operation and maintenance of the water system in a cost-effective, safe, and business-like manner in accordance with all applicable laws and the terms and conditions of the agreement. The City agreed to pay United Water-Atlanta an annual operation and maintenance fee of \$21.4 million, in monthly installments, with provisions allowing for annual and certain other adjustments. The agreement also provides for the City to reimburse United Water-Atlanta for certain pass-through costs such as utilities, for work performed under additional service authorizations (ASA), and for material capital repair and replacement projects (MCRR). The City retains responsibility for certain capital improvement projects and may award capital projects to United Water-Atlanta or other contractors, at its discretion.

City Payments to United Water-Atlanta

From 1999 through 2001, the City paid nearly \$93.5 million to United Water-Atlanta. Over two-thirds of this amount, \$63.6 million, represents the basic operation and maintenance fee (O & M). Pass-through costs, ASAs, and MCRR projects account for the remaining payments.

Exhibit 1 below shows these payments by year and type. Some of the year-to-year fluctuation is a result of payment delays. For example, the pass-through costs paid in 2000 and 2001 also include costs incurred in 1999. Even with such variations, payments for both ASAs and MCRR projects experienced large increases during the three years.

Exhibit 1. City Payments to United Water-Atlanta, 1999-2001³

<u>Year</u>	<u>Types of Payments</u>				
	<u>O&M</u>	<u>Pass-Through</u>	<u>ASA</u>	<u>MCRR</u>	<u>Total</u>
1999	\$19,714,233	\$ 0	\$ 4,170,436	\$ 57,544	\$23,942,214
2000	21,681,569	3,134,170	1,881,527	1,323,216	28,020,482
2001	<u>22,205,404</u>	<u>3,122,508</u>	<u>13,230,178</u>	<u>2,933,013</u>	<u>41,491,104</u>
Total	\$63,601,206	\$6,256,678	\$19,282,142	\$4,313,774	\$93,453,800

Source: Department of Finance, Department of Watershed Management

Projected and Estimated Actual Savings from Contracting for Water Services

It has been widely reported that the United Water-Atlanta agreement is expected to save the City \$400 million over 20 years, averaging \$20 million a year. We have not been able to identify a clear basis for this figure.

The consulting firm of Brown and Caldwell estimated likely savings under several scenarios for making the City's water and wastewater services more efficient and competitive, including the option of contracting with a private firm for operation and maintenance of the water system. The firm projected savings from this option at \$52.9 million for the first three years, about \$17 million to \$18 million annually.⁴ The Brown and Caldwell analysis was done in 1997, based on the City's 1996 expenditures.

United Water-Atlanta recently provided its own analysis of the City's savings as a result of the agreement. The company estimated savings at \$70 million through 2002.⁵

Methodology. We used Brown and Caldwell's projections as the primary comparison point for our estimate of actual savings, and replicated their methodology, with minor adjustments, to estimate actual costs for 1996 through 1998.

Brown and Caldwell compiled 1996 actual expenditures for Department of Water operations and management, as well as for other

³ Please note that the table includes only actual payments made and does not include requests for additional compensation that were not paid due to disputes existing between the City and United Water-Atlanta concerning entitlement to payment, etc.

⁴ Brown and Caldwell, Price Waterhouse LLP, and Harrington, George and Dunn, *Implementation Plan for Privatization/ Reengineering of Water, Wastewater and Sewer Systems*, Version 1.0, January 1998, p. 11.

⁵ Letter from Michael J. Chesser, Chairman and CEO of United Water, to Jack E. Ravan, Commissioner of Watershed Management, December 23, 2002.

City administrative and indirect costs that are allocated to water services. Brown and Caldwell projected the 1996 expenditures forward at an annual inflation rate of three percent. They used projections of future expenditures as a baseline, representing the cost of running the water system with continued City operation. The City's consultants then estimated savings from private operation compared to this baseline. It is important to note that this analysis was done before a private operator was selected, the terms of the resulting agreement were identified, and actual contract fees were known.

We estimated actual savings by using actual expenditures for 1998, the last year of City operation of the water system, and projecting this amount forward using the average annual rates of inflation for 1999 through 2001. This projection represents the estimated cost of continued City operation, without a contract with a private operator. With one exception, we included the same expenditure categories used by Brown and Caldwell.⁶ From this estimate, we subtracted the City's actual expenditures for operating and managing the water system for the same three years, including payments to United Water-Atlanta. The difference represents the estimated actual savings to the City from private water system operation.

⁶ We excluded fixed claims and benefits from City administrative and indirect costs allocated to water services because these expenditures vary both in amount and in allocation between water services and sewer services. This exclusion would have lowered Brown and Caldwell's projection of savings in administrative and indirect costs. The difference between the consultants' projection and our estimate of actual savings in this category was \$1 million.

Findings

Summary

Have projected savings from the United Water-Atlanta agreement been realized? No. We estimate the City saved \$29.4 million in operating and administrative expenses in the first three years of the agreement. At close to \$10 million annually, this is about one-half of the often-cited estimate of \$20 million annual savings. Estimated savings are slightly more than one-half of the three-year savings of \$52.9 million that City consultants projected before the City's contracting decision was executed.

The primary reason for lower-than-expected savings is that the City had already begun to lower its operating costs for water services during the two years before the United Water-Atlanta agreement commenced. From 1996 to 1998, the former Department of Water's operating expenses, and other City administrative and indirect costs allocated to water services, decreased by \$5.5 million. Adjusted for inflation, this was an annual savings of \$8.9 million in 1998. This reduction, in part because of a City retirement incentive but also due to other operating savings, should not be attributed to the agreement with United Water-Atlanta.

Were projected savings from contracting for operation of the City's water system reasonable? Yes. The consultants made reasonable assumptions and used appropriate methods to project savings, based on information available at the time. The consultants did not have information on the Department of Water's staffing and expenditure reductions in 1997 and 1998 that perhaps would have altered their projected savings from private management of the water system.

Annual payment to the City's general fund needs further review. Since 1998, the water and sewer fund has made a payment in lieu of the property taxes and franchise fees that privately-owned utilities pay. The payment does not change our estimate of total savings achieved under the agreement with United Water-Atlanta. However, at \$9.8 million annually, it has offset the operating savings intended to increase available funds for sewer improvements. While this type of payment in lieu of taxes (PILOT) and franchise fees are charged to city-owned utilities in other localities, its use in Atlanta merits further review for several reasons. First, the rationale for the PILOT and its

relationship to other charges for direct and indirect administrative support from the City's general fund is unclear. Second, the future impact of the payment on water and sewer rates and funding of capital improvements should be examined in light of the expected cost of consent decree compliance and infrastructure investment. Finally, the amount of the charge has not been calculated annually, as is the case for property taxes and franchise fees imposed on private utilities, and as its stated method of calculation would suggest.

Our review of this issue to date is limited, and therefore we make no recommendations at this time. However, we will consider further audit work on charges to the water and sewer fund in lieu of taxes and franchise fees, as well as City administrative support and indirect costs charged to the fund.

City Has Not Realized Projected Savings from Private Water Operation

The City's three-year savings of \$29.4 million are slightly more than one-half (about 55 percent) of the savings that were projected to result from private water operation. Consultants for the City projected three-year savings of \$52.9 million. However, the city achieved cost reductions before the contract that are not attributable to the agreement with United Water-Atlanta. The company's own analysis appears to overstate the City's savings.

Annual Savings Close to \$10 Million in First Three Years

Exhibit 2 shows the estimated actual savings for each year, 1999 through 2001, for both the Department of Water and for other City administrative and indirect costs allocated to water services. Without private operation, we estimated that expenditures would have been \$49.8 million in 1999, increasing to \$53.9 million in 2001. Actual expenditures during this period were \$39.8 million in 1999 and \$44.1 million in 2001. This yields annual savings of \$10 million in the first year of the United Water-Atlanta agreement, decreasing to \$9.7 million in the third year.

Without the agreement, we estimated that expenditures would have increased since 1998 by the annual average rate of inflation for 1999 through 2001, except for natural gas costs. We used actual expenditures for natural gas in 1999 and 2001 because costs increased far more than the rate of inflation during these years. The decrease in

savings in 2000 and 2001 is a result of increases in other Department of Water operating expenses.

Exhibit 2. Expenditures and Estimated Savings, 1999 – 2001				
	1999	2000	2001	Total
*Estimated Expenditures Without Private Operation				
Department of Water	\$44,996,841	\$46,526,733	\$48,767,561	\$140,291,135
Other City Administrative Costs	4,784,893	4,947,580	5,086,112	14,818,585
Total	\$49,781,734	\$51,474,313	\$53,853,673	\$155,109,720
**Actual Expenditures				
Department of Water	\$37,183,438	\$38,746,032	\$41,217,790	\$117,147,260
Other City Administrative Costs	2,616,968	3,064,797	2,899,355	8,581,120
Total	\$39,800,406	\$41,810,829	\$44,117,145	\$125,728,380
Estimated Savings	\$9,981,328	\$9,663,484	\$9,736,528	\$29,381,340

*Based on 1998 expenditures, adjusted for inflation using annual average CPI increases (U.S. City Average) of 2.2%, 3.4%, and 2.8% respectively. Actual natural gas expenditures are used to compensate for price increases in excess of inflation.

**See Appendix for expenditure detail for 1996 through 2001.

Source: Department of Finance, Department of Watershed Management, Brown and Caldwell, and audit staff analysis

City Reduced Water-Related Costs Before Agreement Began

Savings resulting from private operation of the water system have not met projections because the City reduced Department of Water expenditures in the two years before the United Water-Atlanta agreement took effect. Projecting these savings into the agreement period suggests an annual savings of \$8.9 million that should not be attributed to the private operator.

Exhibit 3 shows the projected savings in Department of Water and other City costs, compared to our estimate of actual savings for the three-year period combined. Estimated actual savings of \$23.1 million in the Department of Water were only about one-half of the consultants' \$45.6 million projection, while the \$6.3 million in savings for City administrative and indirect costs were only about \$1 million short of their projection.

Exhibit 3. Three-Year Projected and Estimated Actual Savings (in millions)

1999 – 2001 Savings	Department of Water	Other City Administrative and Indirect Costs	Total
Projected Savings	\$45.6	\$7.3	\$52.9
Estimated Actual Savings	<u>23.1</u>	<u>6.3</u>	<u>29.4</u>
Difference	\$22.5	\$1.0	\$23.5

Source: Brown and Caldwell, *Implementation Plan*, page 11, and audit staff analysis

Actual expenditures for the Department of Water and related City costs dropped \$5.5 million, from \$53.7 million in 1996 to \$48.2 million in 1998 (see Appendix 1). The City implemented a retirement incentive in 1998 that reduced personnel expenses. However, total expenditure reductions occurred not only in personnel expenses but in other operating costs as well.

If expenditures before the agreement had continued to increase, then our estimate of savings during the agreement would have been higher, probably very close to the Brown and Caldwell projections shown in Exhibit 3. To illustrate, the City would have spent \$57.1 million to run the water system in 1998, the year before private operation, if expenditures since 1996 had grown at 3 percent a year, the rate used in Brown and Caldwell’s projections.⁷ Thus, the City had already realized annual savings of \$8.9 million in 1998.

United Water-Atlanta Appears to Overstate City Savings

Correspondence from United Water-Atlanta to the City attributes City savings of \$70 million through 2002 to the agreement.⁸ The details of the analysis were not included, but the available information suggests that the savings are overstated. The company’s representation of actual expenditures during the contract period appears to be too low, and their estimate of what the City would have spent without the agreement appears to be too high. We have not determined the specific reasons, which may include different sources of City expenditure data, inclusion of savings prior to the agreement,

⁷ 1996 was the last year of actual expenditures available when Brown and Caldwell did their projections. Their savings projections for 1999 through 2001 were based on a projection of 1998 expenditures before the City’s actual cost reductions at that time were apparent.

⁸ Letter from Michael J. Chesser, Chairman and CEO of United Water, to Jack E. Ravan, Commissioner of Watershed Management, December 23, 2002.

exclusion of City costs outside the Department of Water, or other factors.

Annual Payment to General Fund Needs Further Review

We identified an issue related to our audit objectives that merits a separate discussion. The water and sewer fund makes an annual payment to the City's general fund, in lieu of the taxes and fees paid by other utilities. Although the payment does not change our estimate of the savings achieved under the agreement with United Water-Atlanta, it offsets the amount of savings available for sewer improvements. At \$9.8 million annually, these payments totaled \$29.4 million for 1999 through 2001. The rationale for the payment and its amount need further review. We will consider further audit work on this and other charges to the water and sewer fund.

Payment Is Intended to Substitute for Utility Franchise Fee and Property Taxes

Two ordinances adopted in October 1998 authorize payments from the water and sewer fund that are intended to take the place of property taxes and franchise fees paid by privately-owned utilities. The ordinances note that such charges to publicly-owned utilities are commonly used in other cities.

Ordinance 98-O-1920 authorized a franchise fee utility charge of up to five percent of gross revenue from water and sewer service charges. Franchise fees are imposed on other utilities as compensation to the City for their use of the City's streets and rights-of-way, and the ordinance states that the City should also be compensated by its water and sewer system for the same privilege.

Ordinance 98-O-1921 authorized an annual payment in lieu of property taxes (PILOT), in the same amount that the water and sewer system would be assessed if it were privately owned. The stated rationale is that the water and sewer enterprise fund operations use general fund facilities and services that are supported by property tax revenue.

The franchise fee and the PILOT are paid to the general fund as a single combined annual payment.

Rationale for Payment and Its Amount Need Further Review

The basis for the annual payment is unclear because of the other payments from the water and sewer fund to the general fund. Further audit work would look at the relationship of these charges to the administrative and indirect costs the fund also pays for.

The City's initiation of the annual payment coincided with private operation of the water system. An important motivation for the decision to contract out was apparently the desire to increase available funds for sewer improvements without rate increases. Further audit work would examine the impact of the payment on water and sewer rates and funding of capital improvements.

The payment was calculated at \$9.8 million during 1999 for the franchise fee and PILOT combined and remained at that level through 2001. Thus, the amount has not been sensitive to changes in revenue from year to year, as are the fees and taxes paid by other utilities. For example, a five percent increase in water and sewer service gross revenues would have caused the franchise fee portion of the payment to increase from \$7.8 million in 1999 to \$8.4 million in 2001. We did not determine how much the PILOT on water and sewer property would have changed during this period. Further audit work would review calculation methods for accuracy and reasonableness.

APPENDIX

**DEPARTMENT OF WATER AND RELATED CITY EXPENDITURES
1996 - 2001**

	COSTS FOR THREE YEARS PRIOR TO AGREEMENT			COSTS FOR FIRST THREE YEARS OF AGREEMENT		
	1996	1997	1998	1999	2000	2001
Department Operating and Management Costs:						
Personnel	\$27,871,758	\$28,606,712	\$25,358,541	\$1,944,006	\$1,129,691	\$1,296,094
Utilities	6,976,984	7,212,973	7,305,511	7,930,831	7,046,248	8,329,414
Supplies	4,642,676	3,732,343	3,288,927	835,465	676,152	486,288
Service, Repair and Maintenance Contracts	2,585,814	1,876,108	1,310,819	852,881	1,545,979	1,674,216
Public Works and Waste Disposal Services	518,090	264,725	182,978	276,346	336,707	159,811
Consultant and Professional Services	2,198,972	2,870,281	2,556,280	23,781,462	27,802,374	29,002,986
Data Processing	919,804	877,500	955,570	1,458,522	60,105	52,449
Motor Equipment	2,905,403	2,231,892	2,141,598	22,325	2,236	7,876
Other Operating Expenses	<u>332,811</u>	<u>352,987</u>	<u>431,549</u>	<u>81,601</u>	<u>146,540</u>	<u>208,656</u>
Subtotal	\$48,952,312	\$48,025,520	\$43,531,773	\$37,183,438	\$38,746,032	\$41,217,790
*City Administrative and Indirect Costs:						
Personnel	\$314,327	\$298,977	\$250,203	\$31,689	\$8,479	\$162,792
Chief Operating Officer	0	108,722	284,856	49,966	2,452	147,334
Office of Program & Performance Evaluation	0	0	21,804	39,330	120,418	7,996
Finance	1,133,518	1,517,067	1,196,845	640,564	204,380	434,315
Purchasing	224,030	210,867	210,486	61,736	91,489	254,423
Law	220,588	263,577	362,653	265,197	321,791	156,869
Contract Compliance	75,438	72,597	115,832	124,725	172,646	116,438
Employee Related	580,028	274,274	323,746	7,955	6,831	73,646
General City Overhead	<u>2,169,557</u>	<u>1,998,205</u>	<u>1,915,469</u>	<u>1,395,806</u>	<u>2,136,310</u>	<u>1,545,543</u>
Subtotal	\$4,717,486	\$4,744,285	\$4,681,892	\$2,616,968	\$3,064,797	\$2,899,355
TOTAL	\$53,669,798	\$52,769,805	\$48,213,665	\$39,800,406	\$41,810,830	\$44,117,145

*Omits fixed claims and benefits costs that would not change as a result of privatizing the work.