


David Whitaker, Esq.
Director
Irvin Corley, Jr.
Executive Policy Manager
Marcell R. Todd, Jr.
Director, City Planning
Commission
Janese Chapman
Director, Historic Designation
Advisory Board

City of Detroit
CITY COUNCIL
LEGISLATIVE POLICY DIVISION
208 Coleman A. Young Municipal Center
Detroit, Michigan 48226
Phone: (313) 224-4946 Fax: (313) 224-4336

Marcel Hurt, Esq.
Kimani Jeffrey
Anthony W. L. Johnson
Phillip Keller, Esq.
Edward King
Kelsey Maas
Jamie Murphy
Latawn Oden
Analine Powers, Ph.D.
W. Akilah Redmond
Rebecca Savage
Sabrina Shockley
Renee Short
Floyd Stanley
Thomas Stephens, Esq.
Timarie Szwed
Theresa Thomas
Ian Tomashik
Ashley A. Wilson

John Alexander
LaKisha Barclift, Esq.
Paige Blessman
M. Rory Bolger, Ph.D., FAICP
Lisa DiChiera
Eric Fazzini, AICP
Willene Green
Christopher Gulock, AICP
Derrick Headd

TO: The Honorable City Council

FROM: David Whitaker, Director 
Legislative Policy Division Staff

DATE: February 5, 2024

RE: Report on Cost Benefit Analysis for In-house versus Private Contractors for Proposed Enhanced Trash Hauling Services

During the City Council’s Formal Session meeting on Tuesday, January 30, 2024, there was a robust discussion on the two proposed enhanced trash hauling contracts with Priority Waste, LLC and Waste Management of Michigan, Inc. that, if approved by the City Council, would increase the cost of trash hauling services by \$12 million, from a \$28 million annual cost to a \$40 million annual cost in year one, and an increase in the cost by \$15 million annually through year five of the proposed contracts.¹

During the above discussion, Council Member Angela Calloway, Council President Mary Sheffield, and Council Member Gabriela Santiago-Romero requested the Legislative Policy Division (LPD) to provide a cost benefit analysis for in-house versus private contractors for the proposed enhanced trash hauling services.

This report herein represents LPD’s response to the above request. Since LPD lacks expertise in providing trash hauling services with the infrastructure and personnel required to provide these services, we reached out to representatives of the Department of Public Works, the General Services Department, and the Detroit Building Authority to assist LPD in providing this cost benefit analysis. We thank these departments for the information they provided us with for this report.

¹ The Legislative Policy Division’s (LPD) report entitled “Impact of Garbage Fee Increases on the City of Detroit’s Budget and General Fund”, dated December 8, 2023, provides more detail of the proposed enhanced trash hauling contracts, the increased cost in trash hauling services that would be incurred if the Council approves these contracts, and the extra cost to the City’s general fund with or without an increase to the current \$240 solid waste fee, if these contracts are approved by the Council. This report can be found under the link “Legislative Policy Division Reports” using the City of Detroit’s website search bar.

Summary

It would cost the City of Detroit \$12.5 to 14.3 million more annually over a five-year period to bring in-house the proposed enhanced trash hauling services (weekly trash, bulk, recycling, yard waste, curbside debris, and construction debris collection) than to use the proposed private contractors (Priority Waste and Waste Management) to provide these services under their proposed five-year contracts.

This conclusion is based on the need for the City of Detroit to spend \$293.5 million on new facilities and equipment in start up costs to provide enhanced trash hauling services in-house, as well as spend over \$25 million annually in personnel, maintenance, fuel, electricity, water, and new container cost. LPD assumes the \$200 million in new facility cost would be financed using a 25-year unlimited tax general obligation bond² (UTGO bond) sale and the \$93.5 million in equipment would be financed using a ten-year installment purchase contract.

The in-house scenario is in contract with the City of Detroit spending \$39.7 to \$44.7 annually on the five-year private contractor enhanced trash hauling service contracts.

The information in this report below and the cost benefit calculations in the attached spreadsheet (Attachment I) provide more detailed information on LPD's cost benefit analysis.

Start-up Costs to Provide Enhanced Trash Hauling Services In-house

The City of Detroit would have to spend \$293.5 million on new facilities and trash hauling related equipment to provide enhanced trash hauling services in-house, an enormous investment. Table 1 below provides detail on the new facilities investment:

Table 1
New Facilities Investment Needed for In-house Enhanced Trash Hauling Services

Description of New Facilities: New garages with bays and equipment located at the Southfield Yard located on westside of Detroit and at Russel Ferry on eastside of Detroit to house new trash hauling equipment.	Cost: \$200 million (cost could go higher if land needs to be purchased) Useful life: 30 years Design and planning: 8 months to a year Build out timeframe: 18 months to two years, including procurement process
Financing of \$200 million investment: LPD assumes a 25-year UTGO bond sale, at 6% interest rate.	

It is important to note that Attachment II shows that there is only \$46.3 million in unissued UTGO bond authorization as of January 31, 2024³ that could be used towards the \$200 million new facility investment identified above. To the extent that any of the unissued UTGO bond authorization can be used for this investment, the Administration and City Council would nonetheless need to seek additional UTGO bond authorization to issue bonds for the \$200 million new facility investment.

² Unlimited tax general obligation (UTGO) bonds are voter-authorized bonds paid off from property taxes based on the City of Detroit's property tax debt millage. In contrast, limited tax general obligation (LTGO) bonds are non-voter bonds and paid for out of the City's general fund and are not paid for out of property taxes based on the property tax debt millage.

³ Per the City of Detroit's Official Statement for the City's \$100 million bond sale that took place on July 13, 2023, the City's last bond sale. This Official Statement can be found on the City of Detroit's website under the Office of the Chief Financial Officer link, Detroit Bonds sub link, and City of Detroit Investor Relations sub link.

The Council should also note that facilities that housed the former trash hauling related equipment that was used when refuse collection services were performed in-house by the City of Detroit and before these services were privatized in 2014 have been consolidated including closing the Livernois Garage and begun to decommission M19 garage, which is old and outdated. Table 2 below provides detail on the trash hauling related equipment investment:

Table 2
New Trash Hauling Related Equipment Investment Needed for In-house Enhanced Trash Hauling Services

<u>Equipment Description</u>	<u>Cost/useful life</u>
110 automated side loaders (trash and recyclables) @ \$360,000/unit	\$40 million; 7 to 10-year useful life
56 Log Loaders @\$150,000/unit (bulk and vacant lots)	\$8.4 million; 7 to 10-year useful life
75 Rear Loader Garbage Trucks @ \$350,000/unit (yard waste and bulk)	\$26.2 million; 7 to 10-year useful life
15 Front End Loaders @\$200,000/unit (vacant lots)	\$3 million; 7 to 10-year useful life
70 Dump Trucks @\$210,000/unit (bulk)	\$14.7 million; 7 to 10-year useful life
8 Stake Trucks @ \$65,000/unit (container delivery & pickup)	\$0.5 million; 7 to 10-year useful life
14 Supervisor Vehicles @ \$45,000/unit	\$0.6 million; 7 to 10-year useful life
Total Trash Hauling Related Equipment	\$93.5 million
It would take 12-18 months to receive the equipment above.	
Financing of \$93.5 million investment: LPD assumes a ten-year installment purchase contract at 7% interest rate.	

The Council should note that the former trash hauling equipment that was used when refuse collection services were performed in-house by the City of Detroit and before these services were privatized in 2014 have been auctioned many years ago.

Annual Costs to Provide Enhanced Trash Hauling Services In-house

The City of Detroit would have to spend \$25.5 to \$28.7 million annually over five years on annual cost, including new personnel, maintenance, fuel, electricity, water, and new container cost to provide enhanced trash hauling services in-house, an enormous investment. Table 3 below provides detail on the annual cost investment:

[Rest of page is blank]

Table 3
Annual Cost Investment Needed for In-house Enhanced Trash Hauling Services

<u>Annual cost in-house: 3% growth rate after Year 1</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Personnel (DPW): 226 Refuse Collection Packer Operator Truck Drivers; 15 Construction Equipment Operators; Supervision and Laborers	20,200,000	20,806,000	21,430,180	22,073,085	22,735,278
Personnel (GSD): 12 mechanics on two shifts to help maintain the new trash hauling fleet	1,250,000	1,287,500	1,326,125	1,365,909	1,406,886
Maintenance/parts for new trash hauling equipment	1,400,000	1,442,000	1,485,260	1,529,818	1,575,712
Fuel cost	1,700,000	1,751,000	1,803,530	1,857,636	1,913,365
Electricity and water	700,000	721,000	742,630	764,909	787,856
2,200 trash containers are replaced annually at cost of \$65 per container	143,000	147,290	151,709	156,260	160,948
2,000 new recycling carts are delivered annually at cost of \$55 per cart	110,000	113,300	116,699	120,200	123,806
Total annual cost in-house	25,503,000	26,268,090	27,056,133	27,867,817	28,703,851

The Council should note that most of the former trash hauling employees that were used when refuse collection services were performed in-house by the City of Detroit and before they were privatized in 2014 were hired by one of the private contractors in 2014.

Conclusion of Cost Benefit Analysis

LPD provided the following details to perform a cost benefit analysis for in-house versus private contractors for the proposed enhanced trash hauling services:

- One-time start-up cost: New facilities investment needed for in-house enhanced trash hauling services (Table 1 above)
- One-time start-up cost: New trash hauling related equipment investment needed for in-house enhanced trash hauling services (Table 2 above)
- Annual cost to provide enhanced trash hauling services in-house (Table 3 above)
- Cost benefit calculations comparing the cost of bringing enhanced trash hauling services in-house versus these services being performed the proposed private contracts Priority Waste and Waste Management (Attachment I)

Table 4 below provides a summary of the cost benefit analysis based on the information described previously:

Table 4
Summary of Cost Benefit Analysis for In-house versus Private Contractors for the Proposed Enhanced Trash Hauling Services

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Start-up cost: New facilities: \$200M and \$93.5M financing	28,490,605	28,490,605	28,490,605	28,490,605	28,490,605	
Annual cost in-house: 3% growth rate after Year 1						
Personnel (DPW) and (GSD)	21,450,000	22,093,500	22,756,305	23,438,994	24,142,164	
Maintenance/parts; fuel; electricity and water	3,800,000	3,914,000	4,031,420	4,152,363	4,276,933	
2,200 trash containers and 2,000 new recycling carts	253,000	260,590	268,408	276,460	284,754	
Total cost in-house	53,993,605	54,758,695	55,546,738	56,358,422	57,194,456	277,851,916
Private contractors						
Priority Waste (Areas 3 and 4)	16,530,252	17,026,159	17,536,944	18,063,052	18,604,944	87,761,351
Waste Management (Areas 1 and 2)	23,157,288	23,852,007	24,567,567	25,304,594	26,063,732	122,945,188
Total cost private contractors	39,687,540	40,878,166	42,104,511	43,367,646	44,668,676	210,706,539
Cost/benefit: in-house versus private contractors	14,306,065	13,880,529	13,442,227	12,990,776	12,525,780	67,145,377

As can be seen by Table 4 above, it would cost the City of Detroit \$12.5 to 14.3 million more annually over a five-year period to bring in-house the proposed enhanced trash hauling services (weekly trash, bulk, recycling, yard waste, curbside debris, and construction debris collection) than to use the proposed private contractors (Priority Waste and Waste Management) to provide these services under their proposed five-year contracts.

Please let us know if we can provide any more assistance.

Attachment I

Cost benefit analysis for in-house versus private contractor for enhanced trash hauling services

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
One-time cost in-house						
Financing option:						
New facilities: \$200M, 30-year life, 25-year G.O. bond at 6%	15,463,234	15,463,234	15,463,234	15,463,234	15,463,234	
New equipment: \$93.5M, 10-year life, 10-year installment purchase contract at 7%	13,027,371	13,027,371	13,027,371	13,027,371	13,027,371	
Annual cost in-house: 3% growth rate after Year 1						
Personnel (DPW)	20,200,000	20,806,000	21,430,180	22,073,085	22,735,278	
Personnel (GSD)	1,250,000	1,287,500	1,326,125	1,365,909	1,406,886	
Maintenance/parts	1,400,000	1,442,000	1,485,260	1,529,818	1,575,712	
Fuel cost	1,700,000	1,751,000	1,803,530	1,857,636	1,913,365	
Electricity and water	700,000	721,000	742,630	764,909	787,856	
2,200 trash containers are replaced annually at cost of \$65 per container	143,000	147,290	151,709	156,260	160,948	
2,000 new recycling carts are delivered annually at cost of \$55 per cart	110,000	113,300	116,699	120,200	123,806	
Total cost in-house	53,993,605	54,758,695	55,546,738	56,358,422	57,194,456	277,851,916
Private contractors						
Waste Management (Area 1)	10,001,520	10,301,566	10,610,613	10,928,931	11,256,799	53,099,429
Waste Management (Area 2)	13,155,768	13,550,441	13,956,954	14,375,663	14,806,933	69,845,759
Sub-total Waste Management	23,157,288	23,852,007	24,567,567	25,304,594	26,063,732	122,945,188
Priority (Area 3)	7,526,172	7,751,957	7,984,516	8,224,051	8,470,773	39,957,469
Priority (Area 4)	9,004,080	9,274,202	9,552,428	9,839,001	10,134,171	47,803,882
Sub-total Priority Waste	16,530,252	17,026,159	17,536,944	18,063,052	18,604,944	87,761,351
Total cost private contractors	39,687,540	40,878,166	42,104,511	43,367,646	44,668,676	210,706,539
Cost/benefit: in-house versus private contractors	14,306,065	13,880,529	13,442,227	12,990,776	12,525,780	67,145,377

Summary of Cost benefit analysis for in-house versus private contractor for enhanced trash hauling services

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Start-up cost: New facilities: \$200M and \$93.5M financing	28,490,605	28,490,605	28,490,605	28,490,605	28,490,605	
Annual cost in-house: 3% growth rate after Year 1						
Personnel (DPW) and (GSD) Maintenance/parts; fuel; electricity and water	21,450,000	22,093,500	22,756,305	23,438,994	24,142,164	
2,200 trash containers and 2,000 new recycling carts	3,800,000	3,914,000	4,031,420	4,152,363	4,276,933	
	253,000	260,590	268,408	276,460	284,754	
Total cost in-house	53,993,605	54,758,695	55,546,738	56,358,422	57,194,456	277,851,916
Private contractors						
Priority Waste (Areas 3 and 4) Waste Management (Areas 1 and 2)	16,530,252	17,026,159	17,536,944	18,063,052	18,604,944	87,761,351
	23,157,288	23,852,007	24,567,567	25,304,594	26,063,732	122,945,188
Total cost private contractors	39,687,540	40,878,166	42,104,511	43,367,646	44,668,676	210,706,539
Cost/benefit: in-house versus private contractors	14,306,065	13,880,529	13,442,227	12,990,776	12,525,780	67,145,377

Annual cost in-house: 3% growth

<u>rate after Year 1</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	
Personnel (DPW): 226 Refuse Collection Packer Operator Truck Drivers; 15 Construction Equipment Operators; Supervision and Laborers	20,200,000	20,806,000	21,430,180	22,073,085	22,735,278	107,244,543
Personnel (GSD): 12 mechanics on two shifts to help maintain the new trash hauling fleet	1,250,000	1,287,500	1,326,125	1,365,909	1,406,886	6,636,420
Maintenance/parts for new trash hauling equipment	1,400,000	1,442,000	1,485,260	1,529,818	1,575,712	7,432,790
Fuel cost	1,700,000	1,751,000	1,803,530	1,857,636	1,913,365	9,025,531
Electricity and water	700,000	721,000	742,630	764,909	787,856	3,716,395
2,200 trash containers are replaced annually at cost of \$65 per container	143,000	147,290	151,709	156,260	160,948	759,206
2,000 new recycling carts are delivered annually at cost of \$55 per cart	110,000	113,300	116,699	120,200	123,806	584,005
Total annual cost in-house	<u>25,503,000</u>	<u>26,268,090</u>	<u>27,056,133</u>	<u>27,867,817</u>	<u>28,703,851</u>	135,398,891

Attachment II

**Table 37 – Authorized but Unissued Debt
Including Issuance of the Bonds**

<u>General Obligation (Unlimited Tax) Bonds</u>	<u>Date of Voter Approval</u>	<u>Remaining Authorization</u>
Public Safety	11/2/2004	\$3,313,112
Neighborhood / Economic Development	11/2/2004	12,769
Public Lighting	2/24/2009	297,743
	2/24/2009	22,000,000
Museums, Libraries, Recreation and Other Cultural	2/24/2009	9,016,515
Transportation	11/2/2004	11,501,849
	2/24/2009	146,840
Neighborhood Improvement	11/3/2020	0
		<u>\$46,288,828</u>

SOURCE: Office of the Chief Financial Officer.

Limited Tax Bonds

The City may issue limited tax general obligation bonds or other obligations without the vote of the electors. However, taxes may not be levied in excess of constitutional, statutory or Charter limitations for the payment thereof. Such bonds are payable from general non-restricted moneys of the City. Certain of such limited tax obligations are secured with multiple liens on specific revenues such as Distributable State Aid. The City has utilized limited tax obligations to finance settlements with city creditors pursuant to the Plan of Adjustment, vehicle purchases, general capital improvements, deficit elimination and the City's Risk Management Fund.

Revenue Bonds

There are generally no voter approval requirements for the issuance of revenue bonds. The City issues revenue bonds to finance and refinance various capital projects for water supply, sewage disposal and convention facilities and, through the City of Detroit Building Authority, parking facilities. Additional revenue bonds may be issued for these systems provided certain specific additional bonds tests are met under applicable bond documents.

Other Capital Financing Sources

The City also receives State and federal funds which finance certain construction and capital projects. These include state gas and motor vehicle registration dollars for street improvements, federal Community Development Block Grant revenues largely for continuing urban renewal projects and funds through the State and federal government for transportation