



**Office of the West Seneca Town Supervisor
Hon. Gary A. Dickson**

Memorandum

To: Honorable Town Board
From: Gary Dickson, Town Supervisor
Date: September 2, 2021
Subject: Sanitation study

Dear Colleagues,

At my request, in 2020 Finance Director Wnek executed a professional services contract with an accounting firm to conduct a study of the relative cost of switching sanitation services from the current rear loading trucks with three crew each to automatic side loading trucks (ASL) with one crew member. These ASLs are similar to the trucks that collect recycling in West Seneca. As you can see from the Summary of Results, the study estimated savings at \$1.1 million over ten years.

Please note that I am NOT suggesting that we switch to ASLs. Residents appear to be happy to pay higher costs for superior service. But the issue of ASLs is raised periodically by residents, so this study gives us some data from a neutral investigator.

Analysis of Benefits of Purchasing Side Loading Waste
Disposal Vehicles
Summary of Results

I was engaged by the Town of West Seneca to investigate the benefits of replacing their current fleet of rear loading waste disposal vehicles with side loading Loader Waste Disposal Vehicles. My study involved participating in a seminar sponsored by SWANA – Solid Waste Association of North America. The seminar that was attended discussed the history of Automated Collection, the Technology and Benefits of it, and an overview of how Miami-Dade County Department of Solid Waste Management in Florida gradually replaced their fleet with side-loaders. I had a phone interview with Joseph M. Hickman Strategic/Municipal Sales Manager for Modern Disposal. I also researched various articles on the internet. I gathered current fleet data, employment data, route information and insurance data from the Town of West Seneca Supervisor and Director of Finance. The detailed results of the study are included in the slides that follow.

In summary, the Side-loader is substantially more expensive than the rear loader by approximately \$170,000. The cost to repair/maintain the Side-arm loader is substantially more than the rear loader approximately \$132,000 over the estimated 10 year life of the Truck. The benefits of replacing the current rear loading fleet are numerous, including less individual contact with waste for employees, less potential workers compensation claims, and substantial reduction in labor costs as the side-arm loader requires only one driver.

The Town currently has 16 employees in the Waste Removal Department, and 19 rear loading trucks. Of the 19 rear loading trucks, 2 are new (purchased in 2020), 8 are considered in fair condition (purchased 2014 and prior) the remainder are ready for Auction. There are a total of 10 in active use.

Over a ten year period, purchasing one side-arm truck every year for a total of 8 new side loading trucks and reducing the sanitation department work force by 1 employee the first year and 2 every year after for a total reassignment of 7 employees, the Town would save approximately

\$1,120,040 over the 10 year period. This estimate includes the cost of purchasing the trucks, borrowing, repairs/maintenance and an additional department head salary.

If the Town were to decide to purchase a side-loader truck every other year, and reassign employees every other year, the overall savings over a 14 year period would be \$2,270,453. This analysis yields additional savings as the Town would be purchasing only six side loading trucks as compared to 8 in the every year replacement plan. The Town would still reassign 7 employees. Currently the Town has only six routes. If the fleet were replaced with side loader trucks they would also only need six drivers. The estimates made in the study include having 9 employees and one supervisor.

Under either scenario, purchasing every year or every other year, and reassignment of employees due to attrition in other departments would yield a substantial savings in labor costs.



Louann Laurito-Bahgat, CPA,CFE

Bahgat & Laurito-Bahgat, CPA PC

July 14, 2021

TOWN OF WEST SENECA

SANITATION DEPARTMENT STUDY
COST BENEFIT ANALYSIS OF IMPLEMENTING SIDE LOADER
WASTE DISPOSAL TRUCKS

Estimated Cost of New Side Loader Trucks

- Automated side loader trucks are more expensive than traditional rear loader trucks.
- On average a new side loader is approximately \$345,000.
- Require more maintenance due to increased mechanical parts.
- Require specialized training for drivers.

Financial Benefits of Side Loader Trucks

- Require a single operator.
 - Can pick up more in a route.
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- Reduction in workers compensation claims due to increased safety for workers, less heavy lifting and less opportunity for work related injury and fatality. Sanitation workers are in the top 6 most dangerous jobs.
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- Since 2018 the Town has incurred \$217,302 in Workers Compensation claims due to injury of sanitation workers.

Environmental Benefits of Side Loader Truck

- Beneficial for nonlinear streets.
- Cleaner, healthier neighborhoods with no litter on streets after pickup.
- Less employee contact with waste.

Current Costs of Sanitation Services

- Currently the Town does not have a separate budget for the Sanitation Department.
- The Town has 16 employees that are used in sanitation.
- The average wage of sanitation workers is \$53,000 with the average cost of benefits at \$34,872.
(employee retirement, health insurance, social Security tax and workers compensation)

Current Estimated Costs with 1 Driver to 2 Laborers		
Wages	\$	848,000
Benefits		557,952
Total	\$	1,405,952

Potential Savings of Implementing Side Loader

Current Estimated Costs with 1 Driver and 2 Laborers	
The Town currently has 16 employees.	
Wages	\$ 848,000
Benefits	557,952
Total	\$ 1,405,952
Estimated Costs with Side Arm only 1 Driver	
The Town would need at least 6 drivers.	
Wages	\$ 318,000
Benefits	209,232
Total	\$ 527,232
Potential Savings	\$ 878,720

Current Sanitation Fleet

Index of All SANITATION Equipment

All information current to August 2020

Vehicle Number	Make/Model	Year	VIN #	Plate #	Mileage	Purchase Price	Used For	Inspection	# Services/Breakdowns	Service Ranking	Condition	Additional Notes	
1099	American LaFrance garbage truck	2007	5SXHANCY07RY84695	AK9799	\$ 149,750.00	not in use	6/30/2020	26			AUCTION		
1100	Freightliner garbage truck	2020	3A1HG5EXLDLIC7953	BC8171	\$ 5,344	\$ 178,73.00	General		4	LOW	GREAT		
1101	Freightliner garbage truck	2020	3A1HG5EXLDLIC7952	BC8170	\$ 7,957	\$ 178,713.00	general		2	LOW	GREAT		
1102	American LaFrance garbage truck	2007	5SXHANCY27RY84696	AK9917	97,928	\$ 149,750.00	not in use	6/30/2020	22	MED-HIGH	AUCTION		
1104	Autocar garbage truck	2002	5VCD6UEB3N194691	AK9914	\$ 126,565.00	not in use	7/31/2013	3			AUCTION	NOT IN USE	
1105	Volvo garbage truck	1999	4V2DC2UE2YN240270	AK9890	\$ 112,000.00	not in use	7/31/2014	1			AUCTION	NOT IN USE	
1106	Volvo garbage truck	1999	4V2DC2UE2YN240269	AK9919	13,880	\$ 112,000.00	General	5/31/2020	28	MED-HIGH	POOR	NOT IN USE/SEASONAL YARD WASTE TRUCK	
1107	Volvo garbage truck	2001	4V2DC6UE1N323975	AK9810	\$ 116,500.00	not in use	1/5/2015	NA			AUCTION	NOT IN USE	
1108	Volvo garbage truck	2001	4V2D6UE1N323976	AK9809	184,353	\$ 116,500.00	1/31/2020	20			POOR/AUCTION		
1109	Chevy pickup	2006	1GCHK2AU36E261527	AK9931	175,489		1/31/2021	18	MED-HIGH	POOR	NEEDS TO BE REPLACED		
1109T	Ford	1997	2FTDF1722VCA68556	K74605	\$ 14,166.00	not in use	10/31/2010	NA		N/A	TRADED PRIOR		
1110	Freightliner garbage truck	2009	1PVHC7C9ADAN98989	AK9961	\$ 16,2,888.50	General	12/31/2020	30+	MED-HIGH	FAIR	SPARE/YARD WASTE		
1111	Freightliner garbage truck	2009	1PVHC7C9ADAN8990	AK9801	95,431	\$ 16,2,888.50	General	6/30/2020	30+	MED-HIGH	FAIR	SPARE/YARD WASTE	
1112	Freightliner garbage truck	2013	1PVHG3DVSDHHF0570	AK9831	54,269		6/30/2020	30+	MED-HIGH	FAIR	CAB GOOD/ WAYNE PACKER BODY ISSUE		
1113	Freightliner garbage truck	2013	1PVHG3DVSDHHF0569	AK9827	55,090		11/30/2020	30+	MED-HIGH	FAIR	CAB GOOD/ WAYNE PACKER BODY ISSUE		
1114	Freightliner garbage truck	2014	1PVHG3DV9EHF26103	AK9821	45,107	\$ 172,652.00	General	12/31/2020	30+	MED-HIGH	FAIR	CAB GOOD/ WAYNE PACKER BODY ISSUE	
1115	Freightliner garbage truck	2014	1PVHG3DV7EHF26102	AK9818	44,234	\$ 172,652.00	General	6/30/2020	25	MED-HIGH	FAIR	CAB GOOD/ WAYNE PACKER BODY ISSUE	
1116	Freightliner garbage truck	2014	1PVHG3DV0EHF26104	AK9819	43,630	\$ 176,642.00	General	10/30/2020	30+	MED-HIGH	FAIR	CAB GOOD/ WAYNE PACKER BODY ISSUE	
1117	Freightliner garbage truck	2014	1PVHG3DVZEHF26105	AK9817	46,306		1/31/2021	30+			FAIR	CAB GOOD/ WAYNE PACKER BODY ISSUE	

Fleet Currently in Use

Vehicle Number	Make/Model	Year	VIN #	Plate #	Mileage	Purchase Price	Used For	Inspection	# Services/ Breakdowns	Service Ranking	Condition	Additional Notes
1110	Freightliner garbage truck	2009	1FVHC7CV9ADAN8989	AK9951	\$ 162,888.50	General	12/31/2020	30+	MED-HIGH	FAIR		SPARE/YARD WASTE
1111	Freightliner garbage truck	2009	1FVHC7CV5ADAN8990	AK9801	95,431	\$ 162,888.50	General	6/30/2020	30+	MED-HIGH	FAIR	SPARE/YARD WASTE
1112	Freightliner garbage truck	2013	1FVHG3DV5DHFF0570	AK9831	54,269		General	6/30/2020	30+	MED-HIGH	FAIR	CAB GOOD / WAYNE PACKER BODY ISSUE
1113	Freightliner garbage truck	2013	1FVHG3DV9DHFF0559	AK9827	55,090		General	11/30/2020	30+	MED-HIGH	FAIR	CAB GOOD / WAYNE PACKER BODY ISSUE
1114	Freightliner garbage truck	2014	1FVHG3DV9EHFZ6103	AK9821	45,107	\$ 172,652.00	General	12/31/2020	30+	MED-HIGH	FAIR	CAB GOOD / WAYNE PACKER BODY ISSUE
1115	Freightliner garbage truck	2014	1FVHG3DV7EHFZ6102	AK9818	44,234	\$ 172,652.00	General	6/30/2020	25	MED-HIGH	FAIR	CAB GOOD / WAYNE PACKER BODY ISSUE
1116	Freightliner garbage truck	2014	1FVHG3DV0EHFZ6104	AK9839	43,630	\$ 178,642.00	General	10/30/2020	30+	MED-HIGH	FAIR	CAB GOOD / WAYNE PACKER BODY ISSUE
1117	Freightliner garbage truck	2014	1FVHG3DV2EHFZ6105	AK9817	46,306		General	1/31/2021	30+	MED-HIGH	FAIR	CAB GOOD / WAYNE PACKER BODY ISSUE
1100	Freightliner garbage truck	2020	3ALHGSFEXLDLC7953	BC8171	5,344	\$ 178,173.00	General		4	LOW	GREAT	
1101	Freightliner garbage truck	2020	3ALHGSFEXLDLC7952	BC8170	7,957	\$ 178,713.00	General		2	LOW	GREAT	

Estimated life expectancy is between 10 and 15 years.

Current Replacement Plan

TRUCKS	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Truck 1	175,000														175,000
Truck 2	175,000														175,000
Truck 3	-	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 4		37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 5			37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 6				37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 7					37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 8						37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 9							37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
Truck 10								37,000	37,000	37,000	37,000	37,000	37,000	37,000	185,000
	\$ 350,000 \$	- \$	\$ 37,000	\$ 74,000	\$ 111,000	\$ 148,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 1,830,000

Projected Replacement with Side Arm Truck

Estimated Cost of Truck \$345,000, Estimated increase in cost of truck 1.5%, Estimated cost of borrowing 2% - 8 Side Arm Trucks purchased

Progressive reduction of labor due to attrition and re-assignment to Highway department

Number of Employees Reassigned 1 3 3
There are currently 16 employees, eliminate 7 leaving a total of 9 employees.

Additional Costs to Consider

Upon further discussion with the Town Supervisor, he would like to add a sanitation department supervisor. The analysis also includes additional repairs and maintenance costs as the side arm repairs and maintenance costs are higher than a rear loading vehicle. Side arm trucks have an estimated life between 7-10 years, 10 years if well maintained.

Additional Costs to Consider:

Supervisor for Sanitation Department salary \$80,000, plus benefits \$52,000 and additional repairs and maintenance costs for a side arm truck
Repairs and Maintenance on Side arm trucks are typically the same in years 1 & 2 as rear loaders, from years 3-5 they are on average \$17,000 more, in years 6-8 costs are on average \$27,000 more.
Estimated increase in annual costs at 1.5%. Trucks 1 and 2 are rear loading and have the same estimated costs of repairs and maintenance as side arm trucks in years 1 & 2.

TRUCKS	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Estimated Additional Costs
Add one supervisor	132,000	133,980	135,990	138,030	140,100	142,202	144,335	146,500	148,698	150,928	153,192	155,490	1,721,445
Additional Maintenance													
Truck 3 (2022)	17,000	17,255	17,514	27,000	27,405	27,816	28,233	28,656	28,656	28,656	29,086	29,086	190,879
Truck 4 (2023)	17,255	17,514	17,514	17,777	27,405	27,816	28,233	28,656	28,656	28,656	29,086	29,086	193,742
Truck 5 (2024)		17,514	17,777	18,044	27,816	28,233	28,656	28,656	28,656	28,656	29,086	29,086	196,648
Truck 6 (2025)			17,777	18,044	18,315	18,315	18,315	18,315	18,315	18,315	18,315	18,315	169,633
Truck 7 (2026)				18,044	18,315	18,315	18,315	18,315	18,315	18,315	18,315	18,315	142,213
Truck 8 (2027)					18,315	18,315	18,315	18,315	18,315	18,315	18,315	18,315	114,382
Truck 9 (2028)						18,590	18,590	18,590	18,590	18,590	18,590	18,590	86,133
Truck 10 (2029)							18,869	18,869	18,869	18,869	18,869	18,869	57,460
	\$ 132,000	\$ 133,980	\$ 152,990	\$ 172,540	\$ 192,642	\$ 222,533	\$ 253,277	\$ 284,893	\$ 317,400	\$ 350,815	\$ 336,926	\$ 322,539	\$ 2,872,535

Summary of Cost Benefit Analysis

Cost related to replacing current fleet with side-arm trucks

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Purchase of Trucks	\$ 69,000	\$ 151,559	\$ 226,722	\$ 301,554	\$ 376,081	\$ 381,590	\$ 387,314	\$ 393,123	\$ 313,519	\$ 234,431	\$ 155,832	\$ 77,698	\$ 3,068,423
Total Cost	\$ 132,000	\$ 133,980	\$ 152,990	\$ 172,540	\$ 192,642	\$ 222,533	\$ 253,277	\$ 284,893	\$ 317,400	\$ 350,815	\$ 336,926	\$ 322,539	\$ 2,872,535
Supervisor Costs and Repairs and Maintenance	\$ 201,000	\$ 285,539	\$ 379,712	\$ 474,094	\$ 568,773	\$ 604,123	\$ 640,591	\$ 678,016	\$ 630,919	\$ 585,246	\$ 492,758	\$ 400,237	\$ 5,940,958
Total Estimated Costs													
<u>Benefit of replacing current fleet with side-arm trucks</u>													
Labor Reduction	\$ 89,190	\$ 271,584	\$ 459,430	\$ 652,848	\$ 662,641	\$ 672,581	\$ 682,668	\$ 692,909	\$ 703,304	\$ 713,853	\$ 724,563	\$ 735,427	\$ 7,060,998
Net (cost) benefit of replacement	\$ (111,810)	\$ (13,955)	\$ 79,718	\$ 178,754	\$ 93,918	\$ 68,458	\$ 42,077	\$ 14,893	\$ 72,385	\$ 128,607	\$ 231,805	\$ 335,190	\$ 1,120,040

Projected Replacement with Side Arm Truck every other year

Estimated Cost of Truck \$345,000, Estimated increase in cost of truck 1.5%, Estimated cost of borrowing 2% - 6 Side Arm trucks purchased

TRUCKS	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033-2036	Total Cost of Truck with Interest
Truck 1		Already purchased in 2020 - not a Side Arm Truck											-
Truck 2	69,000	74,520	73,030	71,569	70,138								358,257
Truck 3			77,039	75,498	73,988	72,508	71,058	70,608	70,158	70,708	71,358		370,091
Truck 4				78,194	76,630	75,098	73,596	72,124	70,624	69,124	67,624		375,642
Truck 5					79,367	77,780	76,224	74,700	73,206	71,706	69,206		381,277
Truck 6						80,557	78,946	77,367	75,367	73,367	70,367		386,994
Truck 7							81,766	80,166	78,566	76,566	74,566		392,800
Truck 8								81,034	79,034	77,034	75,034		392,800
Total Cost	\$ 69,000	\$ 74,520	\$ 150,069	\$ 147,067	\$ 222,320	\$ 149,138	\$ 225,523	\$ 151,376	\$ 228,905	\$ 153,646	\$ 232,339	\$ 461,158	\$ 2,265,061

Costs are projected to 2036 to reflect payoff of last truck purchased

Progressive reduction of labor due to attrition and re-assignment to Highway department

The Average cost of a sanitation worker is \$53,000 plus benefits of \$34,872 for a total cost of \$87,872

Elimination of 1 position in year one and 2 per year of purchase thereafter, pay adjust by 1.5% COLA

	89,190	90,528	91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	Savings due to attrition
Reassign 1 Employee (2024)			91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	1,163,146
Reassign 2 Employees (2024)			91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	1,090,066
Reassign 2 Employees (2026)			91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	1,090,066
Reassign 2 Employees (2026)			91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	1,090,066
Reassign 2 Employees (2028)			91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	1,090,066
Reassign 2 Employees (2028)			91,866	93,264	94,663	96,083	97,524	98,987	100,472	101,979	103,509	105,061	1,090,066
Total Savings	\$ 89,190	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 90,528	\$ 7,234,116

Number of Employees reassigned

There are currently 16 employees, eliminate 7 leaving a total of 9 employees.

Additional Costs to Consider every other year replacement

Additional Costs to Consider:

Supervisor for Sanitation Department salary \$80,000, plus benefits \$52,000 and additional repairs and maintenance costs for a side arm truck

Repairs and Maintenance on Side arm trucks are typically the same in years 1&2 as rear loaders, from years 3-5 they are on average \$17,000 more, in years 6-8 costs are on average \$27,000 more.

Estimated increase in annual costs at 1.5%. Trucks 1 and 2 are rear loading and have the same estimated costs of repairs and maintenance as side arm trucks in years 1 &2.

TRUCKS	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033-2036	Total Estimated Additional Costs
Add one supervisor	\$ 132,000	\$ 133,980	\$ 135,990	\$ 138,030	\$ 140,100	\$ 142,202	\$ 144,335	\$ 146,500	\$ 148,698	\$ 150,928	\$ 153,192	\$ 155,490	\$ 1,721,445
Additional Maintenance													
Truck 3 (2022)			\$ 17,000	\$ 17,255	\$ 17,514	\$ 17,777	\$ 18,044	\$ 27,816	\$ 27,405	\$ 28,233	\$ 28,656	\$ 28,656	\$ 190,879
Truck 4 (2024)					\$ 17,514	\$ 17,777							\$ 226,613
Truck 5 (2026)							\$ 18,044						\$ 202,592
Truck 6 (2028)								\$ 18,315	\$ 18,590	\$ 18,869	\$ 19,152	\$ 19,152	\$ 177,382
Truck 7 (2030)													\$ 119,606
Truck 8 (2033)													\$ 60,085
	\$ 132,000	\$ 133,980	\$ 152,990	\$ 155,285	\$ 175,128	\$ 186,979	\$ 207,828	\$ 220,447	\$ 242,344	\$ 255,765	\$ 249,668	\$ 586,188	\$ 2,658,602

Summary of Cost Benefit Analysis with Side Arm Truck Replacement every other year

<u>Cost related to replacing current fleet with side-arm trucks</u>	2022	2023	2024	2025	2026	2028	2029	2030	2031	2032	2033-2036	Total
Purchase of Trucks	\$ 69,000	\$ 74,520	\$ 150,069	\$ 147,067	\$ 222,320	\$ 149,138	\$ 225,523	\$ 151,376	\$ 228,905	\$ 153,646	\$ 232,339	\$ 461,158
Total Cost												\$ 2,265,061
Supervisor Costs												
and Repairs and Maintenance	\$ 132,000	\$ 133,980	\$ 152,990	\$ 155,285	\$ 175,128	\$ 186,979	\$ 207,828	\$ 220,447	\$ 242,344	\$ 255,765	\$ 249,668	\$ 586,188
Total Estimated Costs	\$ 201,000	\$ 208,500	\$ 303,059	\$ 302,352	\$ 397,448	\$ 336,117	\$ 433,351	\$ 371,823	\$ 471,249	\$ 409,411	\$ 482,007	\$ 1,047,346
<u>Benefit of replacing current fleet with side-arm trucks</u>												
Labor Reduction	\$ 89,190	\$ 90,528	\$ 275,658	\$ 279,792	\$ 473,315	\$ 480,415	\$ 682,668	\$ 692,909	\$ 703,304	\$ 713,853	\$ 724,563	\$ 2,027,921
Net (cost) benefit of replacement	\$ (111,810)	\$ (117,972)	\$ (27,401)	\$ (22,560)	\$ 75,867	\$ 144,298	\$ 249,317	\$ 321,086	\$ 232,055	\$ 304,442	\$ 242,556	\$ 980,575
												\$ 2,270,453