



2021 FLEET REPORT

City of New Britain / Department of Public Works



APRIL 2021

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NEW BRITAIN PUBLIC WORKS - FLEET OPERATIONS



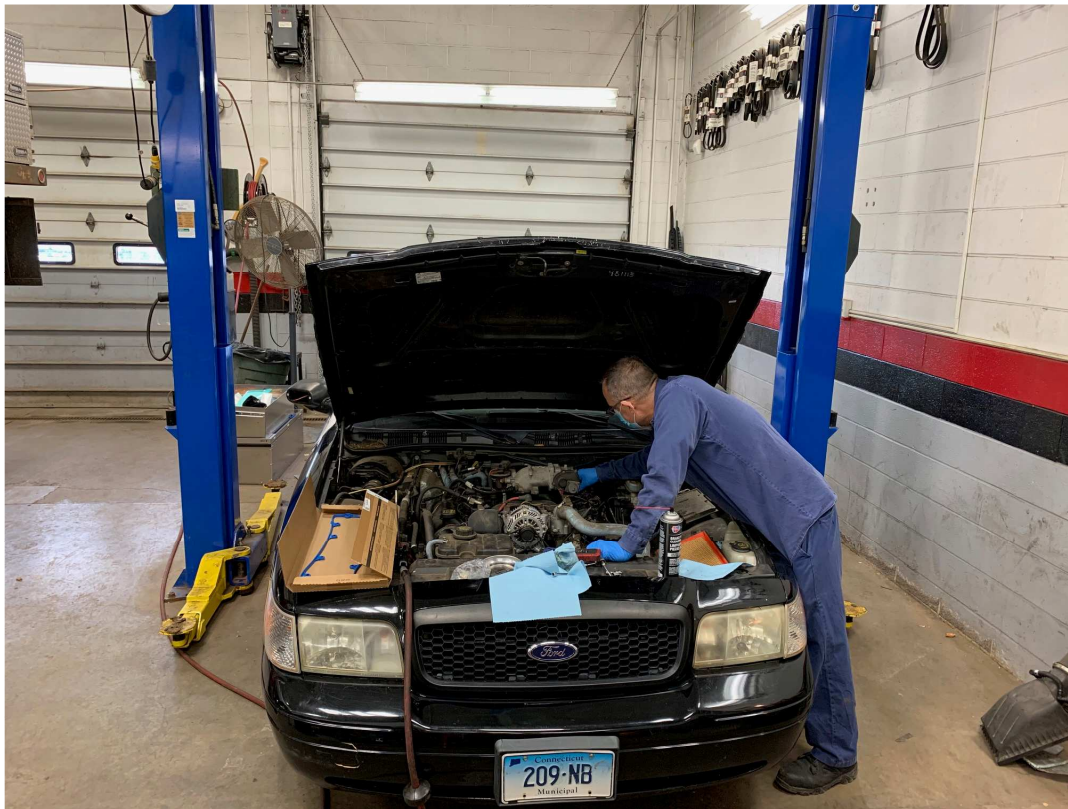
1. FLEET UPDATE

This is the fourth fleet report prepared by New Britain Public Works since 2016. Like the previous reports it provides a comprehensive update about the City's Fleet Operations, the current status of these operations, and changes and progress we've made since the last report was prepared. This report is compiled on a biennial basis. Highlights related to our recent fleet operations include:

1. Despite staff shortages over the past two years due to injuries and health related issues, plus the retirement of two fleet mechanics, the City's Fleet Operations crew continued to keep up with its workload and various job duties. They were also able to transition successfully through the two retirements by filling the two vacancies with highly qualified internal candidates.
2. The City made significant progress funding its vehicle and equipment replacement program by allocating \$3.0 Mil. to purchase 33 vehicles rather than bonding for these costs. The City also began budgeting for Capital Equipment purchases in its Water and Sewer annual budgets. Both of these were big steps towards properly budgeting for these annual expenditures.
3. The City continues to hold a 9% reduction in vehicles since the initial Fleet Report was prepared in 2016, and continues to maintain a one-to-one vehicle salvage to replacement program when new vehicles are purchased in its continual efforts to minimize the size of the City's fleet.

4. The City continues to see its fleet vehicles and equipment exceed their programmed service lives. Related to this, in our December 2020 vehicle and equipment surplus auction, thirteen (13) of the nineteen (19) vehicles surpassed their lifecycle expectancy, and the remaining six (6) met theirs.
5. The City continues to focus on safety training and injury and accident prevention. There continues to be a reduction in vehicle accidents by Public Works employees. The number of significant/serious accidents where a NBPW driver was found to be at fault dropped significantly over the past few years. Between 2016 and 2018 twelve (12) significant accidents occurred where a NBPW driver was determined to be at fault. This number dropped to one (1) in 2019 and 2020.
6. The City's Fleet staff has also been keeping up with the increased complexity of working on vehicles and equipment that involve multiple modules and computer systems that control each aspect of a vehicle's operation. This has added to the complexity of trouble shooting and diagnosing issues on the vehicles, as the Fleet Vehicle Equipment Technicians (V.E.T) need to stay current on various software systems used to diagnose issues on our vehicles. As a cost savings measure, the Fleet V.E.T's have also been taking on larger repairs as time permits, such as engine swaps and transmission replacements that historically were sent out.
7. In FY-20 the City saw fuel use and related costs go up which is largely attributed to the City overall having a larger staff size as vacancies were filled, and also due to the need to assign additional vehicles for work travel to help minimize "close contact" between City workers during the COVID-19 pandemic.
8. Fleet Operations worked with the City's Workers Comp contractor, PMA, and their Senior Risk Management Specialist, Jim Pierce to help ensure OSHA Health and Safety compliance at the Public Works Yard.
9. The 2,000 gallon gasoline and diesel underground fuel tanks at the Water Department were removed and replaced with CT DEEP compliant above ground storage tanks.

2. FLEET OVERVIEW



Like all cities, the City of New Britain maintains a large fleet of vehicles and equipment that is needed for everything from routine maintenance activities to emergency response, and the City's fleet itself is one of the most important and costly assets to manage. Proper management of the City's fleet assets is critical. Hundreds of thousands of dollars can be saved each year through the proper management of the City's fleet by efforts to maximize fuel efficiency, minimize fuel consumption, maximize vehicle and equipment life cycles, and minimizing the overall size of the fleet.

With the exception of the NBFD, the City of New Britain's Fleet Operations are managed by the City's Public Works Department, and are based out of two primary locations: the Public Works City Yard on Harvard Street which primarily manages passenger and larger fleet vehicles, and the maintenance garage at Stanley Quarter Park which primarily handles fleet equipment.

The management, maintenance, and repair of the City's fleet of vehicles and equipment includes the following responsibilities:

- Managing and overseeing the City's capital equipment replacement program
- Establishing procedures to extend vehicle service life
- Scheduling and performing daily repairs and maintenance
- Maintaining computerized records for all maintenance and repair activities performed on every vehicle and piece of equipment in the City's fleet

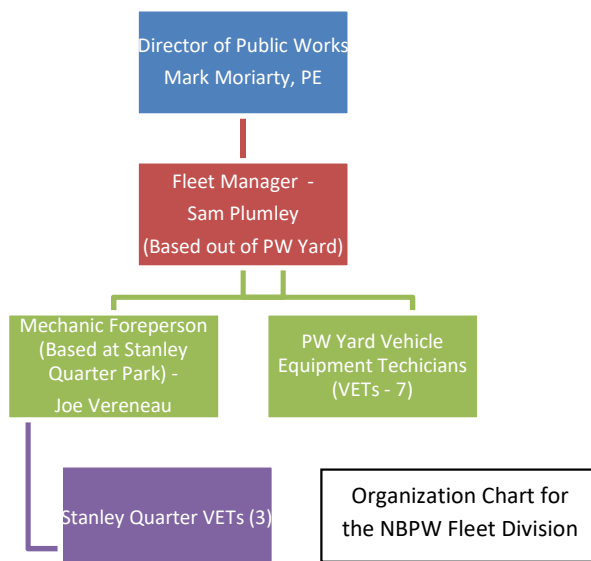
- Tracking accidents involving City fleet vehicles and equipment, and establishing procedures and best practices for the reduction of vehicle accidents
- Ordering and management of the City's fuel for vehicles and equipment
- Performing maintenance/repair work for the New Britain Housing Authority and the Board of Education vehicles and equipment
- Preparing an annual report that documents the current status of the City's fleet, the City's fuel consumption, and any relevant changes

While not discussed in great detail in this report, Public Works Fleet Division is also responsible for the operation and maintenance of the City's Park pools and splash pads.

3. STAFFING



Public Works Fleet Operations are managed by the City's Fleet Manager, Sam Plumley, who is one of 5 direct reports to the Director of Public Works. Overall staffing for Public Works' Fleet Operations currently consists of a Fleet Manager, a Mechanic Foreperson, a Lead Mechanic, and 9 Vehicle Equipment Technicians (V.E.T.). These staffing levels, have not changed since the last Fleet Report was prepared in 2019, but there has been a fair amount of changes to the fleet staffing due mostly to retirements and filling the vacancies that were created. The Fleet Ops staff remains very strong and still is a very talented group of fleet professionals.



Public Works Fleet Operations -Vehicle Equipment Technicians

Donald Woitowitz *
Charles Ebrahimi
Steven Grouten
Stephen Miller
Willam LaForest**
Patrick Lamantini
Brian Crespan
Ryan Cote
Mike Wiotowitz***
Miguel Aldea
Scott Bernabucci

*Acting Lead Mechanic

** At Water Acting as
Maintenance Foreperson

4. VEHICLES AND EQUIPMENT (BY DEPARTMENT)

Efforts to maintain the minimum number of vehicles and equipment needed to perform the many services the City provides remains a high priority, and we have reduced the size of the Fleet significantly since Public Works first Fleet Report was completed in 2016. Related to this with very few exceptions, the City also continues to maintain a one to one ratio for vehicles going to salvage and vehicles purchased to help prevent the size of the fleet from growing.

The following three tables provide quantities of the City's fleet vehicles and equipment organized by City department and/or division along with other information such as the general condition of the various pieces of City owned. An appendix included with this report provides greater details about the specific vehicles and equipment in the City's fleet.

City Department	Number of Vehicles			
	FY-16	FY-17	FY-19	FY-21
Mayor	1	1	2	2
Assessor	1	1	1	1
Building Dept.	6	7	7	7
DMD, City Plan & Econ Development	2	2	2	3
Police Dept. (reflects no. of license plates issued)	111	104	107	103
Facilities (New Department in FY-18)			8	9
EMS	12	12	12	9
Fire Dept./ OEM	39	39	37	34
Health Dept.	6	5	6	6
PW-Engineering	6	5	6	6
PW-Field Services (Streets, Parks, Sanitation, and Traffic)	101	90	80	68
PW-Utilities (Water & Sewer)	60	51	51	49
PW - Fleet & Facilities (eliminated in FY-18)	19	17		
PW - Fleet			7	7
P&R - Cemetery	2	2	2	3
P&R - Recreation	7	7	5	5
P&R - Senior Center	5	5	5	4
P&R - Stanley Golf	2	2	2	2
P&R - Youth Services	4	4	4	4
PW – Pool Cars		5	5	6
Totals	384	359	349	328*

(*NOTE: 21 large pieces of equipment included as vehicles in the 2019 Fleet Report were moved to the Large Equipment list)

2021 Equipment Totals

Public Works

Department

PW Field Service Division	Large Equipment	Medium Sized Equipment	Small Equipment
Streets and Traffic	8	10	23
Sanitation	3	1	5
Walnut Hill Park		13	15
Stanley Quarter Park		12	19
Stanley Quarter Maint. Bld.	2	4	22
AW Stanley Park		9	20
Chesley Park		3	2
Willow Brook Park		9	21
Forestry Operations		4	16
Horticultural Operations		9	24
	13	74	167

PW Utilities Division

Water Dist. & Sewer	7	4	30
Water Caretaker Group		9	48
	7	13	78

Parks & Rec.

Department

Fairview Cemetery	1	13	21
Stanley Golf Course		33	32
	1	46	53

Facilities and Energy

		9	19
Totals:	21	142	317

Equipment Condition Report

(Includes Small, Medium & Large Equipment)

<u>City Operation</u>	Poor	Fair	Good	New
AW Stanley Park	0	3	23	2
Chesley Park	0	2	3	0
Stanley Quarter Park	0	2	25	4
Stanley Quarter Park Shop	1	4	18	5
Walnut Hill Park	0	3	23	2
Willow Brook Park	0	3	24	3
Horticulture	0	1	32	0
Forestry	0	1	19	0
Streets & Traffic	0	4	36	1
Sanitation	0	4	5	0
Water Caretaker Group	2	2	53	0
Water / Sewer Distribution	2	4	35	0
Fairview Cemetery	2	3	29	1
Stanley Golf Course	0	8	52	5
Facilities - City Hall	0	0	28	0
Totals:	7	44	405	23
	1.5%	9.2%	84.6%	4.8%

5. FLEET MAINTENANCE



Performing routine preventive maintenance will continue to be the most critical element for optimizing the life span of City vehicles and equipment. It is also critical for avoiding the repair or replacement of costly major vehicle components such as engines, transmissions and drive trains. As with any maintenance program the goal for New Britain Public Works' preventive maintenance practices is not only to keep vehicles and equipment in sound operating condition, but also to perform preventive maintenance at the appropriate intervals. Both overly frequent and delinquent maintenance intervals are counterproductive to controlling fleet costs.

Fleet maintenance procedures typically do not change much year to year, but the City's Fleet has made some recent improvements to our vehicle and equipment maintenance practices including:

1. More ownership and responsibility has been placed on the users and on the department assigned City vehicles and equipment. Stickers indicating the mileage when a vehicle requires an oil change are now placed on vehicles, similar to what is done at commercial oil change shops.
2. Our Fleet Operations has been using synthetic oils and transmission fluids instead of conventional oil. The benefits of doing this include lowering vehicle emissions, improving fuel and oil economy, increasing engine protection from wear and friction, enable longer intervals between oil changes, and better all-weather protection.

The preventive maintenance practices our mechanics follow are typically based on manufacturer's recommendations for each type of vehicle or equipment, the use of that vehicle, and on local driving conditions which vary throughout the year. Our mechanics may make adjustments to the manufacturer's recommendations if warranted.

Computerized maintenance and repair records are kept for each City vehicle and large equipment using RTA Fleet Management Software which is a widely used Fleet Management aid. Each Fleet Division Vehicle and Equipment Technician (V.E.T.) inputs the maintenance and repair work they perform into the RTA program, and these records are a key tool for making fleet management decisions.

Overall maintenance and repair costs represent a significant portion of the total cost to own and operate a vehicle or piece of equipment, and these costs tend to increase as the vehicle or equipment ages. Once a vehicle or equipment's maintenance and repair costs become too high, and the vehicle has too much downtime, the City typically looks towards replacement.

The City's regular maintenance program for fleet vehicles and equipment includes the following:

<u>Type of Vehicle or Equipment</u>	<u>Preventive Maintenance Program Guidelines</u> <i>Involves:</i> Lube, oil & filter replacement & safety inspection of tires, brakes, suspension, steering components, lights, & electrical systems
Police Cruisers, Passenger Vehicles, Pickup Trucks	Performed every 6 months or 3,000 miles
Medium Size Trucks (Lowboys, F350's)	<ul style="list-style-type: none"> ▪ Performed every 6 months or 5,000 miles ▪ Additional maintenance occurs after every winter snow operation including vehicle wash
Large Dump Trucks	<ul style="list-style-type: none"> ▪ Performed once per year (prior to snow season) or every 5,000 miles ▪ Additional maintenance occurs after every winter snow operation including vehicle wash
Heavy Equipment (backhoes, loaders, etc...)	<ul style="list-style-type: none"> ▪ Performed every 6 months or 300 hours ▪ Additional maintenance occurs after every winter snow operation including vehicle wash
Street Sweepers	Performed once per year or 300 hours
Smaller Equipment (Mowers, Snow Blowers)	<ul style="list-style-type: none"> ▪ Routine maintenance and fluid and filter replacement performed 2 or 3 times per year ▪ Full safety check performed each winter

6. FLEET LIFECYCLE MANAGEMENT



There are many factors involved in managing the lifecycle of the City's fleet of vehicles and equipment. Public sector entities often manage vehicle lifecycle using a different approach from private sector entities. Many private sector entities replace vehicles frequently, strive to optimize their fleet's salvage value, place a high value on the image associated with having a fleet of newer vehicles, and have minimal to no tolerance for vehicle downtime. While these factors are also important in the public sector, New Britain's overall approach, like most municipalities is to minimize the capital cost associated with maintaining our fleet.

Using this approach fleet vehicles and equipment are typically run to the end of their useful service life. Vehicles are usually not retired or replaced until the end of their lifecycle, which is determined based on on-going repair costs, vehicle downtime, and/or safety considerations. Exceptions to this approach primarily involve vehicles critical to emergency response. In these cases high reliability and minimizing downtime are more important, and these vehicles are typically replaced more frequently. An example of this is front line police cruisers which are typically planned for replacement after four to six years.

There are some factors that can affect the lifecycle of municipal fleet vehicles substantially when compared to some other types of fleets. City fleet vehicles are primarily used for city driving that involves frequent stopping. Frequent stopping and starting causes more engine, transmission, brake, and tire wear along with reducing a vehicle's fuel efficiency. City driving also subjects a vehicle's

suspension to a wide variety of road conditions from rough roads, changing grades, and potholes which increase the wear and tear on a vehicle's suspension system.

The lifecycle of a municipal fleet vehicle or piece of equipment is also reduced in northern climates subject to winter snow and ice storms. Fleet vehicles and equipment in these areas are subject to heavy wear and tear from snow clearing, and also the impact of salt on the vehicles which is commonly used for anti-icing. In addition to routine maintenance, regularly washing fleet vehicles is particularly important in northern climates, and especially for vehicles and equipment involved in winter storm operations.

Formally preparing an Annual Fleet Report has been useful to understanding the lifecycles of our vehicles and equipment and how they compare to industry standards. Our planned lifecycles, shown in the table below are generally unchanged from our 2019 Fleet Report, and are based on the lifecycles we're achieving rather than industry standards.

PRIMARY VEHICLE & EQUIPMENT CATEGORIES	INCLUDES	PLANNED LIFECYCLE (YEARS)
Passenger Vehicles	Sedans, vans, and similar	12-15 years
Four Wheel Drive Sports Utility Vehicles	Supervisor, inspector, administration vehicles and similar	12-15 years
Pickup Trucks	Primarily used for Field Operations SV Vehicles	10-12 years
Field Equipment	Tractors, motorized mowing equipment, and similar	12-20 years
Police Primary Vehicles	Front line police cruisers	5-7 years (4-6 years in last report)
Heavy Duty Dump Trucks	GVW of 33,000 lbs and load carrying capacity of 5 tons	10-12 years
Light Duty Dump Trucks	GVW of 17,000 lbs and equipped with 4WD	8-10 years
Utility Trucks	Forestry and traffic bucket trucks, and other similar vehicles	12-15 years
Specialty Trucks	Forestry Lift Truck, Traffic Lift Truck, and similar	10-15 years
Heavy Equipment	Backhoes, front end loaders, sweepers, and similar equipment	12-15 years

Beginning in 2016 the City started using the on-line auction service GovDeals.com for selling our “salvage” vehicles and equipment. This change has increased both the number of bids and revenue we receive on our salvaged vehicles.

The table below shows a comparison with how the City’s most recent surplus vehicles sold at auctioned compared to their planned lifecycles. Thirteen (13) of the nineteen (19) vehicles auctioned off exceeded their planned lifecycle, and the remaining five (5) vehicles met them. A report on these vehicles was given to the City Council at its February 10, 2021 meeting.

<u>City “Surplus” Vehicles Sold at Auction: Lifecycle Comparison</u>				
	<u>Vehicle</u>	<u>Vehicle Category</u>	<u>Planned Lifecycle</u>	<u>Lifecycle Achieved</u>
1	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
2	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
3	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
4	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
5	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
6	2007 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	13 Years
7	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
8	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
9	2011 Ford Crown Victoria Police Interceptor	Front line police cruiser	4-6 Years	9 Years
10	2008 Ford Expedition XLT 4WD	Pick-Up Truck	10-12 Years	12 Years
11	2008 Ford F-350 SD XL SuperCab 4WD	Pick-Up Truck	10-12 Years	12 Years
12	2005 Ford Ranger XLT Long Bed 4WD	Pick-Up Truck	10-12 Years	15 Years
13	2003 Ford F-350 SD XL 4WD DRW	Pick-Up Truck	10-12 Years	17 Years
14	2008 Ford F-250 SD XLT SuperCab Long Bed 4WD	Pick-Up Truck	10-12 Years	12 Years
15	2008 Pontiac G6 Sedan	Passenger Vehicle	12-15 Years	12 Years

16	2008 Honda Civic LX Sedan	Passenger Vehicle	12-15 Years	12 Years
17	2004 Ford Taurus SE	Passenger Vehicle	12-15 Years	16 Years
18	2003 Jeep Grand Cherokee Laredo 4WD	Passenger Vehicle	12-15 Years	17 Years

7. VEHICLE AND EQUIPMENT REPLACEMENT

The City has made recent progress in its fleet management practices through better budgeting and allocating operating funds for the replacement of fleet vehicles and equipment. Fleet replacement costs are essentially annual operating expenditures, but historically the City has bonded, and thus borrowed, to fund these annual costs. In 2020 Mayor Erin Stewart worked with the Finance Department to allocate \$3.0 Mil. for surplus funds for the purchase and replacement of thirty three (33) much needed fleet vehicles and equipment. Fleet Manager, Sam Plumley, worked with each City Department to establish the list of vehicles and equipment to help ensure the list only includes needs and not wants. The vehicles and equipment in the FY-21 Capital Equipment List are listed in the table below:

Public Works - Capital Equipment List - FY-21						
Department	Vehicle / Equipment	Vehicles Primary Use	Quantity	Cost per Item	Total Cost	Vehicle or Equipment being Replaced
PUBLIC WORKS						
Field Services - Parks						
	Bob Cat- Tool Cat	This is a multi use vehicle	1	\$59,645	\$59,645	Replacing a 2005 Tool Cat
	Toro Ground Master 4100-D Mower	To Mow Fields	2	\$68,802	\$137,604	Replace 2 older 4100
	Toro Workman MDX	To Move Material	2	\$11,652	\$23,304	Replace 2 older workman
	Toro Sand Pro 5040	To Prepare Baseball Diamonds	1	\$23,874.00	\$23,874	Replacing a 2001 Sand Pro
	Spider Remote Mower	To Mow Hills at The Parks	1	\$39,000	\$39,000	
Field Services - Streets						
	Jack Hammer For The Taceuchi Excavator	To Break Up Asphalt Roads (Trenches)	1	\$6,500	\$6,500	
	New All Season Body on 31-NB	Salting and Plowing	1	\$57,000	\$57,000	Replacing a 2007 all Season Body That Has Structural Rust Issues
	6 Wheel Dump Truck	For moving material and Snow Plowing	2	\$205,000	\$410,000	Replacing 2-2004 sterling dump trucks
Engineering						
	Ford Explorer	For City Engineer	1	\$29,759	\$29,759	2003 Dodge Durango 33-NB
	Ford Explorer	For The Director Of Public Works	1	\$32,421	\$32,421	2003 Dodge Durango 151-NB
Field Services - Traffic						
	Bucket Truck	For Signal Maintenance	1	\$146,000	\$146,000	1992 Chevy Bucket Truck
Field Services - Transfer Station						
	Truck With a lift Gate And A Grapple Crane	For Picking Up Mattresses And Couches	1	\$109,095	\$109,095	Move there currant rack body down to replace
Facilities & Energy						
	Garage Sweeper	For Sweeping The Garages	1	\$52,641	\$52,641	Old tenant
BUILDING DEPARTMENT						
	Ford Escape AWD	Going out to do Inspections	2	\$25,206	\$50,412	2001 Dodge Stratus-2004 Ford Taurus
FIRE DEPARTMENT						
	Ladder Truck	Main Line Ladder Truck	1	\$1,200,000	\$1,200,000	L-3 1990 E-One Stratosphere (Ladder Failed inspection)
	Pumper	Main Line Fire Apparatus	1	\$600,000	\$600,000	E-10 1982 E-One Hurricane Pumper
	Ford Explorer	For Fire Marshall	1	\$40,500	\$40,500	2000 Chevy Malibu
POLICE DEPARTMENT						
	Ford Interceptor - Patrol Officer	PATROL	8	\$55,835	\$446,680	mileage and high wear vehicles, one for one. Actual vehicles will to be determined when the cars come in. 7-2011 crown vics and 5-2014 explorers over 100,000 miles
	Ford Explorer - Police Administration	ADMINISTRATION	2	\$40,500	\$81,000	New Purchase will replace high mileage and high wear vehicle, one for one. Actual vehicle will to be determined at the time of implementation.
	Explorer cages for K-9	K-9	2	\$7,000	\$14,000	To replace old Crown Vic Cages
TOTAL:					\$3,559,435	

The \$3.0 Mil. allocated for the FY-21 Capital Equipment List did not fully fund the list of vehicles, but came close and the City is pursuing other avenues such as grant money to make up the different.

The City also added line items in both its Water and Sewer annual budgets that cover the vehicles and equipment replacement requirements for their operations without the need for borrowing or incurring debt.

There is hope that the City can move toward funding its fleet replacement costs as annual expenditures. In the short term this would be difficult to achieve without affecting other services. The table below shows the approximate annual cost of funding the City's Fleet replacement needs.

Average Annual Fleet Replacement Cost Breakdown

Number of Fleet Vehicles and Large Equipment	349
Average Vehicle Replacement Cost	\$56,755.97*
Average Lifecycle for NB Fleet Vehicles and Equipment	11.67 Years**
Yearly Average Number of NB Fleet Vehicles and Equipment Needing Replacement	29.91
Average Annual General Fund Fleet Replacement Cost	\$1,697,329/year***

*Based on FY-21 Capital Equipment List excluding large Fire Vehicles

**Based on average Lifecycle Achieved by Salvage Vehicles Sold at Auction in 2020

***Excludes Water and Sewer Vehicle Replacements which are funded as annual operating expenditures

8. FUEL RELATED

Managing fuel consumption, fuel efficiency, and fuel costs are all vital components in the management of the City's fleet. In recent years the City of New Britain has spent approximately \$450,000 per year for the purchase of gasoline and diesel fuel, which is down from previous historical averages. There has also been a focused effort to reduce fuel consumption and improve vehicle fuel efficiency to help lower the City's costs.

We continue to try to further reduce fuel costs through our efforts to increase fuel efficiency. This is important because while looking at the City's annual fuel consumption is important for budgeting fuel consumption is not a reliable indicator of fuel conservation efforts. This is because fuel consumption is influenced by several outside factors such as staffing level changes, the weather, and work assignments. This is especially true during years where there are severe winters, and multiple snow and ice storms.



Fuel efficiency is also weather dependent, but to a lesser degree than fuel consumption. When compared annually fuel efficiency provides a more accurate measure of fuel conservation efforts, and improving the fuel efficiency of the City's fleet has been a major focus area for Public Works Fleet Division, and significant progress has been made in this area.

Current efforts to improve the fuel efficiency and lower fuel consumption include:

1. The City now uses V-6 powered Ford Explorers for its front-line police cruisers instead of V-8 powered Crown Victoria cars. Among other benefits this change resulted in increased fuel efficiency of our police cruisers by over 10 miles per gallon.
2. Verizon Network Fleet's real-time GPS tracking system is installed on nearly all City vehicles, except Police and Fire Department vehicles. Studies have shown that vehicles equipped with GPS Tracking systems reduce miles driven by up to 20% which translates to lower fuel consumption.
3. A strict "No Idling Policy" was implemented and is being enforced in the City's Public Works Department. Unnecessary vehicle idling is a significant issue in Public Works departments, governments agencies, public utilities, and the construction trades. Eliminating it involves a change of culture.

Fuel Master, the software system used to measure the fuel efficiency of the City's fleet, was upgraded in 2016. Fuel Master measures fuel consumption and efficiency for various vehicles in City departments, and is used by agencies like CT DOT and the US Department of Defense. Currently Fuel Master is only installed at the fuel stations at the Public Works City Yard on Harvard Street, and not the several smaller fuel stations located around the City. Fuel use for the smaller fuel stations is manually recorded and submitted monthly to the Public Works Fleet Manager.

The following tables provide fuel related data for our Fleet Operations:

Fueling Stations	Gals.	Fuel Tank Information	Gas	Diesel
Public Works Yard (55 Harvard Street)	15,000	Underground / outdoors	x	
	15,000	Underground / outdoors		x
NB Water Department Bld. (1000 Shuttle Meadow Ave.)	2,500	Outdoors / above ground (1,500 gas & 1,000 diesel)	x	
	1,000	Outdoors / above ground		x
Stanley Golf Course (254 Hartford Road)	1,000	Outdoors / above ground	x	
	2,000	Outdoors / above ground		x
Stanley Quarter Park (451 Blake Rd.)	500	Outdoors / above ground	x	
	500	Outdoors / above ground		x
AW Stanley Park (2159 Stanley Street)	250	Indoors		x
Hungerford Park (1000 Shuttle Meadow Ave.)	250	Outdoors / above ground	x	
	250	Outdoors / above ground		x
Willow Brook Park	250	Outdoors / above ground	x	
	250	Outdoors / above ground		x
Walnut Hill Park	250	Outdoors / above ground	x	
	250	Outdoors / above ground		x
Fairview Cemetery (120 Smalley Street)	500	Outdoors / above ground	x	
	500	Outdoors / above ground		x

Public Works issues public bids annually for the purchase of both gas and diesel fuel, and typically awards these bids based on fixed prices. It's worth noting that the City's cost per gallon for fuel is substantially lower than retail pricing because the City is not subject to sales tax for fuel and other purchases, and because the City contracts are based on large quantities.

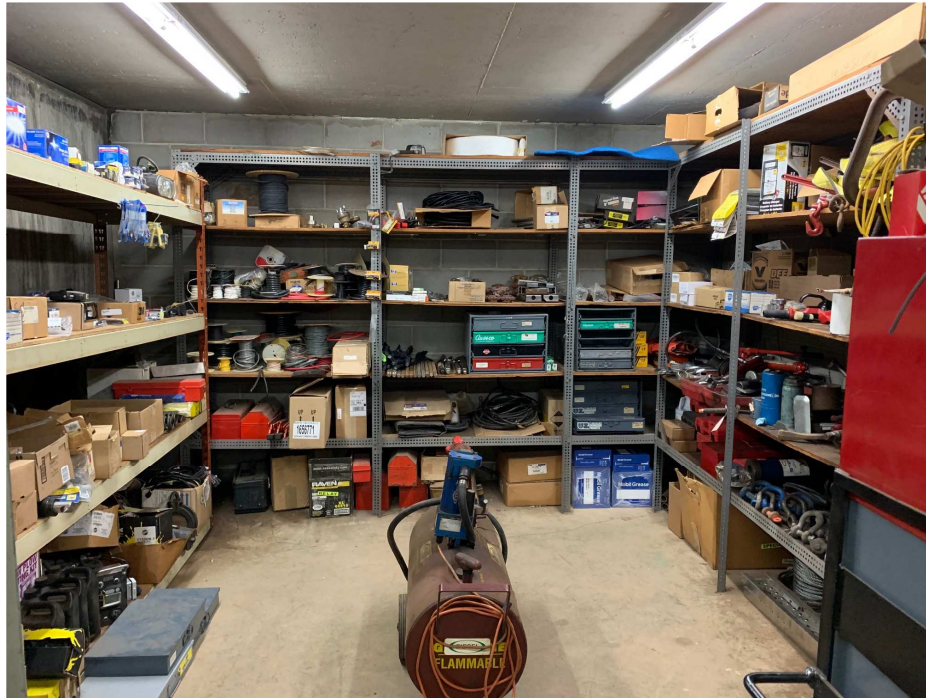
FISCAL YEAR	GAS PRICE PER GAL. (\$/Gal.)	DIESEL PRICE PER GAL. (\$/Gal.)
FY 13	\$3.16	\$2.83
FY 14	\$3.17	\$3.036 - \$3.304 (variable pricing)
FY 15	\$3.05	\$3.03
FY 16	\$2.13	\$1.82
FY 17	\$1.65	\$1.88
FY-18	\$1.97	\$1.94
FY-19	\$1.97	\$2.17
FY-20	\$2.03	\$2.22
FY-21	Going out to bid in May 2021	Going out to bid in March 2021

The table below shows gas and diesel costs covered under the Public Works General Fund Budgets which covers all GF City Departments, Water, Sewer, all Consolidated School District vehicles and equipment, EMS, and Housing Authority:

FUELING PUMPS AT THE PUBLIC WORKS CITY YARD ON HAVARD STREET			
FISCAL YEAR	GAS COST (\$)	DIESEL COST (\$)	TOTAL COST (\$)
FY 13	\$443,135	\$267,364	\$710,499
FY 14	\$436,442	\$225,254	\$661,696
FY 15	\$396,910	\$224,459	\$621,370
FY 16	\$291,885	\$143,753	\$435,638
FY 17	\$236,789	\$118,404	\$355,194
FY-18	\$253,649	\$94,988	\$378,197
FY-19	\$244,955	\$152,203	\$397,1987
FY-20	\$287,862	\$137,107	\$424,968
FY-21	TBD	TBD	TBD
FUELING PUMPS AT THE WATER TREATMENT PLANT			
FISCAL YEAR	GAS COST (\$)	DIESEL COST (\$)	TOTAL COST (\$)
FY 13	\$11,713	\$37,071	\$48,784
FY 14	\$13,012	\$41,731	\$54,743
FY 15	\$14,872	\$45,371	\$60,243
FY 16	\$28,969	\$26,291	\$55,260
FY 17	\$26,677	\$33,186	\$59,863
FY-18	\$27,234	\$14,029	\$41,263
FY-19	\$27,351	N/A	N/A
FY-20	\$30,085	N/A	N/A

Fuel tanks and pumps at the various Parks add approximately \$12,000 in gas in diesel fuel costs to the City's operations annually.

9. PARTS ORDERING AND SUPPLY



There were no major changes related to the ordering of parts and supplies since the previous Fleet Report was prepared in 2019. Parts and supplies used for vehicle and equipment repair and maintenance continue to be organized at a much higher level than had been done historically. Parts ordering and supply for New Britain's fleet faces a similar challenge to that of most other municipal fleets. Most fleet purchases are based on a public, low bid process, meaning municipal fleets tend to involve a wide variety of types, makes and models of vehicles and equipment, making parts ordering and maintaining inventory more difficult. Efforts are ongoing to standardize some of the City's emergency response vehicles, such as front line snow plows and police cruisers to help address this.

Many private companies standardize their fleet vehicles so it is easier for them to have more replacement parts in stock, and their fleet mechanics have more familiarity and expertise with the makes and models of the fleet vehicles and equipment they are required to service. It is not practical to carry a large inventory of parts so the City relies on several vendors to supply parts. Some of the largest suppliers are NAPA, Gengras Ford, and Fleet Pride.

The City does keep windshield wiper parts, brakes, filters, common electrical parts, gaskets, seals, and tires in stock to allow quick repairs to be made during an emergency like winter storm operations.

10. FLEET POLICIES

The City has several policies, procedures, and work rules governing the use of its fleet vehicles and equipment. For Public Works Fleet Policies the following language is included in PW's Standards of Conduct:

The City's vehicles and equipment are some of the most costly assets the City owns, and their proper use, care and maintenance is a shared responsibility of all users. The following are Public Works rules and requirements regarding the use of City-owned vehicles and larger equipment:

- 1. City vehicles and equipment are to be treated with proper care, and drivers must obey all applicable driving laws (e.g., cell phone use, seat belts, etc.);*
- 2. Aggressive and reckless driving shall not be tolerated;*
- 3. City vehicles and equipment are to be used only for work related activities;*
- 4. Employees are required to do a thorough pre-trip check prior to using any City vehicle or equipment, and any issues shall be immediately reported to their supervisor and/or the Fleet Manager;*
- 5. Vehicle trips shall follow the most direct route practical to minimize vehicle mileage, wear, and fuel consumption;*
- 6. At the end of a shift or work day: remove any trash and/or personal items from the vehicle, make sure the vehicle has a minimum of ¼ tank of fuel, and return the keys to the key board or other applicable location;*
- 7. Smoking is not allowed in Public Works vehicles;*
- 8. Properly secure tools, equipment, and/or materials you are transporting;*
- 9. Work assignments shall be structured to minimize the number of vehicles needed to perform an assignment while maintaining efficiency of operations;*
- 10. The idling of vehicles is illegal under CT State statues. In addition New Britain Public Works has implemented a specific "No Idling Policy" to minimize discretionary vehicle idling. Only in cases of temperature extremes will idling be allowed, and then only with your supervisor's approval.*

CDL drivers should note that violations of cell phone laws qualify as "serious traffic violations" under FMCSA regulations, and drivers who violate these restrictions will face penalties up to \$2,750 for each offense.



11. FLEET SAFETY

The US National Safety Council defines a preventable accident as “one in which the driver failed to do everything that they reasonably could have done to avoid it”. The City is committed to minimizing the number of preventable accidents involving City employees, and stresses that City employees operating City-owned vehicles and pieces of equipment do so in a safe manner, and shall follow all applicable laws. The City also has a robust safety program with fleet safety as a major component.

Fleet Safety Programs typically include four main components:

1. Fleet safety training on issues including:
 - preventable accidents
 - backing accidents
 - avoiding rear end collisions
 - defensive driving
 - effective vehicle pre-trips
 - winter driving & black ice
 - trailer use & properly securing materials
 - driver awareness & distracted driving
 - work zone safety
2. The development and enforcement of fleet safety policies and procedures
3. Monitoring driver behavior and modifying driver behavior as needed
4. Comprehensive accident tracking and investigation

The Public Works Department has maintained an Accident Review Committee (ARC) since 2008 which reviews all vehicle and equipment related accidents within the department. The responsibility of this committee is to determine whether or not an accident was preventable, and if the Public Works driver was at fault. Additionally the ARC is charged with identifying patterns in driver behavior, and in some cases identifying drivers who may need retraining or other corrective action. The current Accident Review Committee members are:

1. Sam Plumley, Fleet Manager
2. Mike Thompson, Field Services Division Superintendent
3. Chris Polkowski, Superintendent of Public Works Utilities



4. Dominic Mutone, Public Works Foreperson



The table below lists Public Works Accidents by year for the past 5 years:

Year	City Driver at Fault by ARC	City Driver Not at Fault by ARC	Totals by Year
2016	5 – Significant <u>5 – Minor</u> 10 – Total	2 – Significant <u>3 – Minor</u> 5 – Total	15
2017	3 – Significant <u>8 – Minor</u> 11 – Total	2 – Significant <u>9 – Minor</u> 11 – Total	22
2018	4 – Significant <u>8 – Minor</u> 12 – Total	1 – Significant <u>1 – Minor</u> 2 – Total	14
2019	0 – Significant <u>5 – Minor</u> 5 – Total	0 – Significant <u>5 – Minor</u> 5 – Total	10
2020	1 – Significant <u>8 – Minor</u> 9 – Total	1 – Significant <u>3 – Minor</u> 4 – Total	13

The number of total accidents per year remains slightly lower than historical averages, and what's important is that the number of significant/serious accidents where a NBPW driver was determined to be at fault dropped significantly over the past few years. Between 2016 and 2108 twelve (12) significant/serious accidents occurred where a NBPW driver was determining to be at fault. This number dropped to one (1) in 2019 and 2020. NBPW will continue to step up our safety training efforts to make sure that this trend continues.

12. FLEET GOALS

Every year the Fleet Management Division, like all divisions in Public Works, establishes goals and reviews the past year's accomplishments. This is an important task, and critical to help ensure that the Fleet Division is making good progress and staying current with the best practices of a properly managed Fleet Operation.

Public Works Fleet Divisions' current goals:

1. Maintain the high level of service and performance currently in place by Public Works' Fleet Division
2. Reduce the City's Carbon Footprint as we reduce the overall size of the City Fleet where possible and practical
3. Reduce the City's Carbon Footprint as we improve the fuel efficiency of the City's fleet, and to establish a methodology for better tracking the fuel efficiency of the overall fleet
4. Address staff shortages and when vacancies occur to replace them with highly qualified candidates
5. Install Fuel Master at the Water Administration Building Fuel Pumps to track fuel usage electronically
6. Fully use the RTA Fleet Software to benchmark, track, and measure progress, especially for the Fleet equipment managed out of the Stanley Quarter Park
7. Cross train Fleet Division staff on all fleet duties (large equipment and vehicles, small equipment, passenger vehicles, pools and splash pads)
8. Reduce preventable vehicle accidents through safety training, and closely monitoring vehicle accidents.
9. Expand on the implementation of Key Keeper Systems at all work sites to better manage, track, and control, the use of city vehicles and equipment
10. Improve on PW's Lock-out Tag-out program for vehicles and equipment in need of repair

13. SUMMARY

A City's fleet of vehicles and equipment are critical for everything from providing regular daily maintenance and services for residents and businesses to providing critical emergency response for police, fire, and emergency winter storm operations. As such there is no more important task performed in a Public Works Department than maintaining its fleet. The proper management of a City's fleet is crucial, and decisions made about managing a fleet can either save or cost a municipality hundreds of thousands of dollars per year.

Since the last Fleet Report was prepared in January of 2019 New Britain Public Works' Fleet Division has continued to make very good strides improving its Fleet Management efforts, as the contents of this report confirm.

This year, and moving forward, the Biennial Fleet Report will continue to provide detailed information about the status of the City's fleet operations and the fleet itself, and will serve as a valuable benchmark for measuring annual progress. New Britain Public Works is committed to ensuring that the City's Fleet Division serves as a role model for other organizations, and that the dollars the City spends investing in its fleet are optimized.