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The City of Kawartha Lakes

Fleet and Transit Services Review

Highlights of Final Report

January 2021

Fleet and Transit Services Review

Background...

- The City of Kawartha Lakes, Fleet and Transit Services, sought an independent third-party review of its fleet management
- On March 17, 2020, the City issued an RFP
- On May 15, 2020 RSI engaged to complete the project

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Fleet and Transit Services Review

Scope...

- To develop recommendations regarding program savings, efficiencies, service enhancements, staffing levels, maintenance locations/structures, greenhouse gas emission reductions

- To review the general and emergency service fleet including Public Works, Transit, Fire, Police and Paramedics

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Fleet and Transit Services Review

Key Focal Points...

- Lifecycle optimization
- Service and maintenance best practices
- Contracted versus internal resource cost/benefit
- Fuel management
- Vehicle use
- Procurement practices
- Alternative fuels

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Fleet and Transit Services Review

Approach and Methodology...

(1) Data Collection: CKL's fleet data, including a list of vehicles and equipment, makes/models/years of each unit, kilometers-travelled, fuel used, maintenance costs, and many additional data points, loaded into our Fleet Analytics Review™ (FAR) software

(2) Baseline Analysis: RSI produced a baseline that identified the current-day status of the fleet and many Key Performance Indicators (KPIs) and positioning of the CKL fleet statistics relative to municipal peers.

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Fleet and Transit Services Review

Approach and Methodology...

(3) Exception Management, Internal Benchmarking: Analysis and assessment of each unit's performance relative to similar vehicles in the CKL fleet.

(4) Peer Fleet Comparisons: RSI plotted CKL's key operational statistics (KPIs) alongside same data points for comparable municipal fleets to identify gaps or sub-standard performance. These results highlighted opportunities for improvement and underscored areas for further investigation.

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Fleet and Transit Services Review

Approach and Methodology...

(5) Fleet Stakeholder Discussions and Surveys: RSI held **v**irtual meetings and distributed online surveys to ensure engagement with stakeholders and staff.

(6) Best Management Practices Review: We completed four 'best management practices review' meetings with fleet management personnel from Fleet & Transit Services, Paramedics, Fire Rescue and Police to learn each fleet's operational practices and procedures.

We reviewed shop work practices, PM worksheets, driver reports, driver's daily vehicle inspections, fuel dispensing, vendor invoices/work orders, transactional data and other documentation.

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CKL's Large and Diverse Fleet

Bus	Car	Equipment	Mobile Equipment	Pickup	SUV	Sweeper	Trailer	Truck	Van
Class 4	Mid-size	Power Washer	ATV	Class 2E	Compact	Class 7	Asphalt	Class 3 Dump 1 Ton	Class 2E Full Size Cargo
Class 4 Limo style	Small	Steamer	Backhoe	Class 2E 4x4	Full size		Boat	Class 3 Rescue Fire	Class 2E Mini
		Tank, water	Chipper	Class 2F			Float, large	Class 4 Dump 1 Ton	Class 2F Full Size
			Compactor, landfill	Class 2G			Float, medium	Class 4 Mechanical Fire	Class 2F Full Size Cargo
			Double Roller	Class 2H			Small	Class 4 Rescue Fire	Class 2G Full Size
			Grader	Class 2H 4x4			Trailer	Class 5 Aerial	Class 2G Full Size Cargo
			Ice Resurfacer	Class 3				Class 5 Dump 1 Ton	Class 3 Cutaway
			Loader	Class 3 4x4				Class 5 Rescue Fire	Class 3 Full Size Cargo
			Mower					Class 7 Aerial	Class 4 Cube
			Sweeper					Class 7 Air/Light Fire	
			Tractor					Class 7 Rescue Fire	
			Tractor, large					Class 8 Aerial Fire	
			Tractor, medium					Class 8 Pumper Fire	
			Tractor, small					Class 8 Roll Off	
								Class 8 Single Axle Plow	
								Class 8 Tanker Fire	
								Class 8 Tandem Axle Plow	
								Class 8 Vac	

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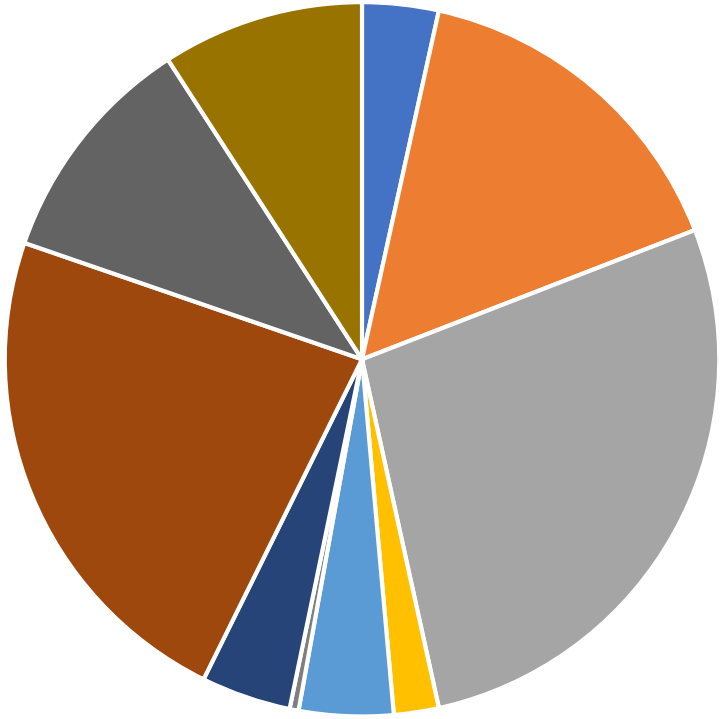
CKL's Large and Diverse Fleet



Cars
Pickups
Trucks
Buses
SUVs
Sweepers
Equipment
Mobile Equipment
Trailers
Vans

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Fleet Review – Baseline Statistics*

- 492 units including vehicles and equipment
- Original purchase price: $61,735,888
- Current-day book (depreciated) value: $28,240,340
- Replacement value: $78,030,965
- Kilometers-travelled: 3,787,692
- Fuel used: 1,517,469 liters
- Repair and maintenance costs: $3,884,827
- CO_2 emissions: 3,855 metric tonnes CO_2e
- Average age of the fleet: 8.3 years

* During a one-year fleet review period

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Works & Transit Sections - Peer Comparison

Municipality	PW	Mobile Equip.	EMS	Police	Transit	Refuse	Parks	Fire	Fleet Mix Tally	Fleet Mix - M and HD Trucks (%)	Peer Fleet Match Factor	Urban or CR	Total Fleet Size	Population	Municipal Area (KM2)	Average Utilization (kms)	Population Ratio (population: vehicle)	Area Ratio (units:km²)	Fleet Average Age (years)	Average Availability (%)	Average Downtime (days)	Average Fuel Consumption	GHG Intensity (CO2/km)	Average Repair Cost (fleet wide) (may include PM if data not provided)	Total Fleet Controllable Cost for Period (R&M, Fuel, Capital & Downtime)	Average Controllable Costs per Unit	Maintenance Ratio (preventive: reactive) (%)	Average operating costs (¢/km)
Peer Fleet 1	1	1	1	1		1			5	6.7	12	CR	170	439,526	967	13,609	2,585	5.7	80.1	4.8			24.8	0.63	$5,079	$1,169,597	$6,880	$0.73
Peer Fleet 2	1	1				1			3	10	13	CR	173	427,421	1,896	22,039	2,471	11.0	6.1	97.5	6.5	17.3	0.52	$8,172	$1,881,760	$10,877	6	$1.29
Peer Fleet 3	1	1	1			1			4	11	15	CR	110	422,204	4,841	33,948	3,838	44.0	5.6	98.9	4	22	0.65	$5,270	$1,661,511	$15,105	64	$0.47
Peer Fleet 4	1	1				1			3	13	16	CR	120	55,545	50	8,421	463	0.4	6	99.4	1.6	40.9	1.00	$1,507	$462,711	$3,856	41	$0.46
Peer Fleet 5	1	1			1	1			4	12	16	U	1307	579,200	1,138	8,455	443	0.9	7.5	94.6	14.1	36.1	0.90	$6,865	$19,911,820	$15,235	31	$1.80
Peer Fleet 6	1	1							2	14	16	CR	56	83,378	4,426	31,962	1,489	79.0	5.8	94.5	8.5	30.4	1.12	$10,443	$1,531,495	$27,348	29	$0.86
Peer Fleet 7	1	1							2	15	17	CR	45	55,289	276	15,497	1,229	6.1	5.2	98.2	5.2	48.8	1.14	$4,656	$693,840	$15,419	47	$0.99
Peer Fleet 8	1	1							2	19	21	CR	23	63,785	2,979	46,860	2,773	129.5	5.2	91.5	13.7	16.7	0.44	$8,930	$503,032	$21,871	63	$0.54
Peer Fleet 9	**1**	**1**			**1**	**1**	**1**		**5**	**17**	**22**	**U**	**308**	**135,000**	**146**	**5,005**	**438**	**0.5**	**7.3**	**96.3**	**9.6**	**38.3**	**1.00**	**$3,937**	**$2,703,196**	**$8,777**		**$1.75**
City of Kawartha Lakes	**1**	**1**	**1**	**1**		**1**	**1**		**6**	**16**	**22**	**CR**	**492**	**75,000**	**3,059**	**10,068**	**152**	**6.2**	**8.3**	**92.6**	**19.2**	**36.9**	**0.50**	**$8,426**	**$8,453,827**	**$17,183**		**$1.71**
Peer Fleet 10	1	1	1	1	1	1			6	18	24	CR	1247	645,862	2,523	25,560	518	2.0	5.5	93.8	16	30.2	0.80	$6,087	$27,721,089	$22,230	10	$0.87
Peer Fleet 11	1	1	1				1		4	20	24	CR	19	143,865	3,673	33,815	7,572	193.3	2.7	95.4	16	21.7	0.55	$10,681	$495,726	$26,091	32	$0.65

CKL Public Works & Transit's operating expenses are on par with comparable peer fleet - despite being one-year older

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Paramedics Section - Peer Comparison

EMS Fleet	Urban or CR	Fleet Size	Population	Area (KM2)	Population ratio (pop.: vehicle)	Area Ratio (km^2:unit)	Fleet Avg. Age (years)	Avg. Utilization (kms)	Avg, Availability (%)	Avg. Downtime (days)	GHG Intensity (CO_2/km)	Avg. Annual cost of repairs	Maintenance Ratio (PM: reactive)	Average operating costs (¢/km)
CKL	CR	14	75,000	3,059.0	3,409	218.5	2.8	38,836	88	31.3	n/a	$12,870	n/a	$0.75
EMS Peer 1	CR	40	439,526	967.2	10,988	24.2	4.1	34,445	n/a	n/a	0.58	$20,196	17.6	$0.86
EMS Peer 2	CR	88	645,862	2,523.0	7,339	28.7	2.6	35,035	87.6	32.2	0.8	$10,552	n/a	$1.19
EMS Peer 3	U	27	109,140	328.0	4,042	12.1	4.6	19,857	99	3.6	0.88	$940	27	n/a

CKL Paramedic's operating expenses are the lowest of three peer EMS fleets

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Police Fleet Section - Peer Comparison

Police Fleet	Urban or CR	Total Fleet Size	Population	Area (km^2)	Population ratio (pop.: vehicle)	Area Ratio (km^2:unit)	Avg. Age (yrs.)	Avg. Utilization (kms)	Avg. Availability (%)	GHG Intensity (CO_2/km)	Avg. Cost of Repairs	Maintenance Ratio (PM: reactive)	Total of Fleet Due for Replacement (%)	Average Op. Cost (¢/km)
CKL	CR	16	75,000	256.4	4,411	191	3.4	19,834	n/a	0.35	$2,091	n/a	19	$0.59
Police Peer Fleet 1	CR	338	439,526	967.2	1,300	3	2.9	20,037	n/a	0.42	$3,945	14	24	$0.77
Police Peer Fleet 2	U	64	109,140	328.0	1,705	5	4.1	28,439	99.5	0.54	$3,148	43	28	$ 0.39

- CKL Police fleet's average operating expenses lowest of three peer fleets
- Cost-per-kilometer at mid-point for the three peer fleets

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Fleet Review - Stakeholder Surveys

- RSI believes it's of high importance to hear the opinions of all stakeholders including management and unionized staff
- We prepared and distributed user-group online surveys.
- One survey was targeted at the management group, a second survey was for all drivers of vehicles and operators of equipment.
- It was clearly communicated to all survey recipients that their responses were confidential and anonymous; as so, they were encouraged to express their opinions freely.

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Fleet Review - Stakeholder Surveys

Question or Topic	Number of Responses	Score/Rating (out of 5)
Customer service	43	3.5
Professionalism	43	3.4
Dependability (promises-kept)	43	3.5
Understanding fleet customer's needs	43	3.4
Sensitivity to urgent needs	43	3.6
Attention to detail (doing it right)	43	3.4
Quality of preventive maintenance	43	3.4
Timeliness of repairs and maintenance	43	3.3
Quality of modifications or upgrades to fleet units	43	3.2
Quality of repairs to fleet units	43	3.5

- Respondents were asked qualitative questions regarding Fleet & Transit Services
- A *high level of satisfaction* with CKL Fleet and Transit Services department was abundantly evident

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Fleet Review – Key Recommendations

- Based on our in-depth fleet review of CKL fleet operations, RSI makes 21 recommendations in our Final Report
- This presentation highlights many key recommendations from the Final Report

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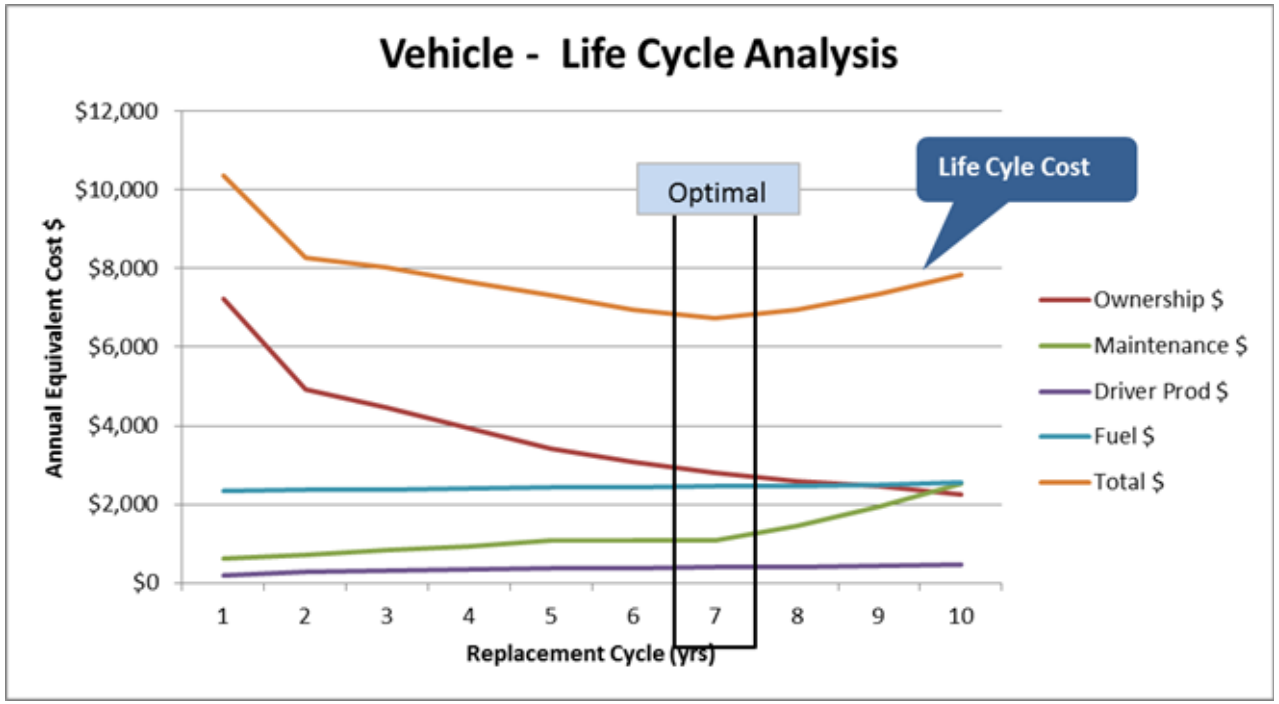
Fleet Review – Lifecycle Analysis

Life cycle analysis (LCA) is a structured approach to determine the best time to replace vehicles and equipment in terms of age, mileage, or other pertinent factors.



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The Aging Fleet

Capital investment in fleet modernization is critical…

- As commercial vehicles age, higher operating expenses result from increased reactive repairs
- If vehicles replaced too soon, value is lost
- The solution is lifecycle analysis based on actual historical operating data

Fleet Review – Lifecycle Analysis

- Life cycle analysis (LCA) was completed for each category of vehicles in the CKL fleet

- For some categories of vehicles, LCA suggests lifecycles should be reduced compared to current-day practices while for others, extended lifecycles may be possible (see report for details)

- We recommend vehicle condition evaluations during every preventive maintenance inspection. In this way, decisions around extending vehicle lifecycles can be founded on data and with a solid understanding of each vehicle's actual condition

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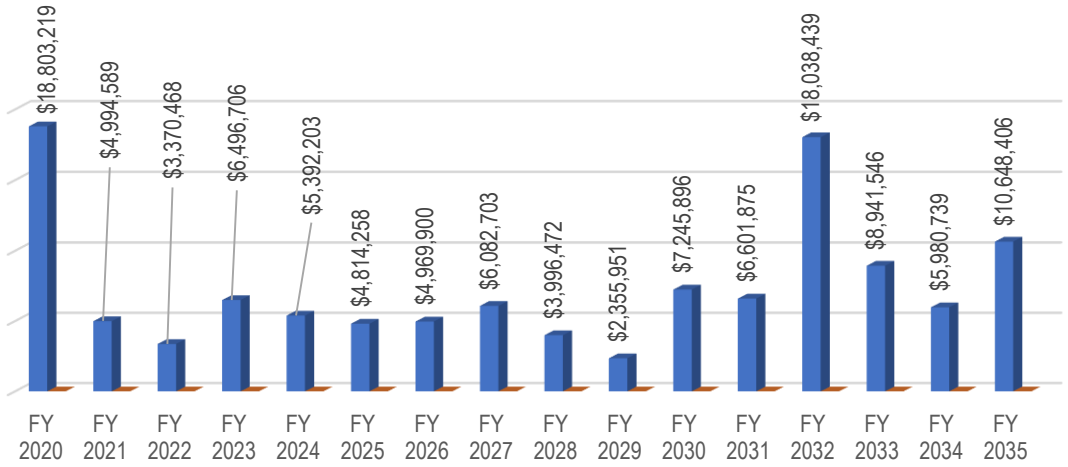
Fleet Review – Long-Term Capital Planning



- LCA was used to calculate a long-term capital budget plan for CKL based on optimized lifecycles
- A large number of units exceed optimal replacement age
- Catch-up spending is needed to reduce the spike, lower operating costs and balance go-forward budgets

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Fleet Review – Best Practices Review

RSI's best management practices in-depth review included these topics for each of CKL's sub-fleets...

1. Asset Management
2. Vehicle Specifications
3. Finance
4. Operating and Capital Budgeting
5. Information Technology
6. Human Resources
7. Fleet Operations
8. Preventive Maintenance
9. Fuel (minimizing the use of)
10. Accidents, Safety & Risk Management
11. Environment
12. Policies & Procedures
13. Fuel Procurement and Distribution
14. Performance Management
15. Communications

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Best Practices Review – Key Recommendations

- CKL fleet management, not having a dedicated fleet management information system (FMIS), is currently unable to access the layers of information essential to optimal fleet asset management.

- With an FMIS, fleet management could make informed data-driven decisions based on around vehicle and equipment utilization rates and costs, and optimize fleet assets.

- Investment in an FMIS, shared across all CKL sub-fleets, is highly-recommended and should be a top priority

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Best Practices Review – Key Recommendations

- A fully-bundled, total cost recovery vehicle chargeback approach is recommended (see report)
- All vehicle costs should be transferred to user groups for their assigned units including direct and indirect expenses, overheads and a capital replacement allotment for the vehicle replacement reserve fund.
- Service Level Agreements should be developed for all vehicle user departments to define expectations.

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Best Practices Review – Key Recommendations

- Costs for fuel used by each assigned vehicle, at-fault accidents and negligent damage costs, should be pass-through costs to user departments with directly assigned vehicles.

- A total-cost-of-ownership (TCO) approach should be used when tendering for new vehicles

- Vehicle standardization is recommended to attain its multiple benefits and cost savings

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Best Practices Review – Key Recommendations

- A Fleet technician apprenticeship program is recommended to help address the issue of recruitment.

- Within the collective agreement and CKL Human Resources job classifications, implement a pay scale aligned with increased levels of technician licences and accreditations.

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Fleet Review – Maintenance Consolidation

- RSI evaluated the cost-reduction business case for taking on the additional maintenance demand of Fire Rescue Services, Paramedics, and Police Services fleets in-house
- Labour costs-per-hour are much lower in-house but savings diminish greatly when all elements are considered.
- The case for in-sourcing all fleet maintenance appears to be thin.
- We recommend careful analysis of all costs. This can begin once total labour demand for all CKL sub-fleets can be tallied via a fleet management information system (FMIS) or some other means of labor-time capture.

Fleet Review – Summary

The 21 full recommendations in the Fleet Review are designed to help Fleet Services in:

- Balancing of Fleet's capital budgets over the next 15 years
- Optimization of fleet assets – extracting maximum value from each unit
- Mitigation of fleet size increases
- Alignment of labour and garage bay requirements to maintenance demand
- Reducing vehicle collisions and protecting CKL’s safety rating
- Optimization of fleet maintenance and spare parts inventory
- Ensuring legal compliance
- A pathway to viable, cost-effective 'green fleet' low-carbon solutions including electric vehicles and best management practices

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Thank you!

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