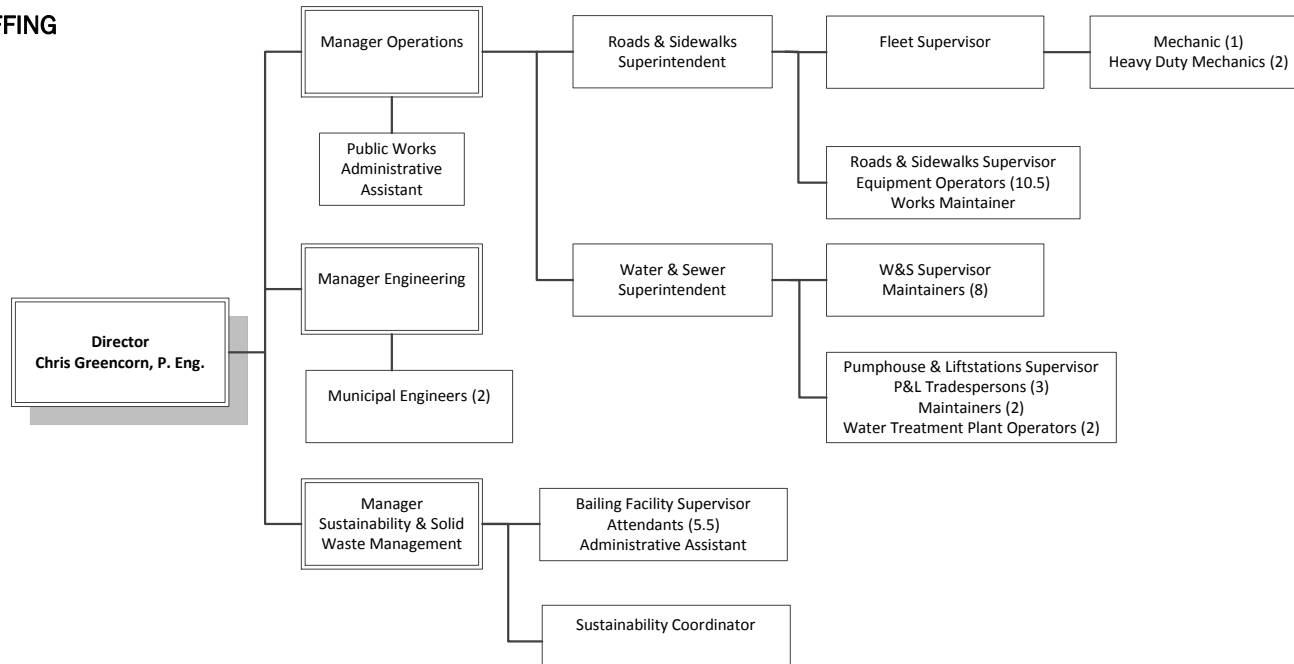


GENERAL FUND - Public Works & Engineering

DEPARTMENT STAFFING



Staffing Summary

	2014 Actual	2015 Budget	2015 Forecast	2016 Budget	2017 Budget	2018 Budget	Note
Directorate	7.00	7.00	7.00	7.00	7.00	7.00	
City Garage	3.65	4.63	4.63	4.46	4.46	4.46	(1)
Roads and Sidewalks	15.04	14.58	14.58	14.81	14.81	14.81	
Solid Waste Mgmt.	9.53	9.26	9.26	9.47	9.47	9.47	(2)
Water and Sewer	20.75	21.25	21.25	19.25	19.25	19.25	(3)
	55.97	56.72	56.72	54.99	54.99	54.99	
Permanent Positions	51.58	53.08	53.08	51.08	51.08	51.08	
Part-time/ Casual	4.39	3.64	3.64	3.91	3.91	3.91	
	55.97	56.72	56.72	54.99	54.99	54.99	

Note:

(1) One new HD Mechanic from 2015 onwards.

(2) Facility Tradesperson from 2008 onwards = .08 PY

(3) The cost of Senior Dispatcher was shared equally with Fire & Ambulance Division until 2015.

Starting in 2015, this PY reported under Fire & Ambulance Division. One additional maintainer was added in 2015 but In 2016 number of maintainers will be reduced by two.

PUBLIC WORKS & ENGINEERING

The Department of Public Works & Engineering strives to provide cost-effective and responsive municipal services to the public within the policies, objectives and budget outlined by City Council. The Department delivers programs in three areas: the Engineering Division, the Works Division and the Solid Waste Division.

The Works Division carries out the operations and maintenance programs which cover the delivery of basic municipal services, including: piped or trucked water and sewer services to all City residents, garbage collection, maintenance and repair of the City's roadways and sidewalks, and vehicle servicing for all City departments.

The Engineering Division delivers and administers the City's capital works programs, which include major construction under the water and sanitation program (such as water treatment and sewage disposal facilities), the roads and sidewalks program (new road construction, paving and concrete work), the land development program and major and minor capital works for other City departments.

The Solid Waste Division carries out the disposal of waste in accordance with regulations, and facilitates recycling.

This department is also responsible for Community Energy Plan initiatives. According to Yellowknife's 2013 Energy Inventory, the average Yellowknifer emitted less CO₂ than the national average but, as a whole, the community still spends an estimated \$144 million on energy annually. Within the framework of rising fuel prices and Canada's commitment to reduce emissions, the City has developed a Community Energy Plan (CEP) that was adopted by Council in 2006. The scope of the CEP includes a focused effort to reduce emissions and energy use within City operations and to support the community in its effort to do the same. An update to the CEP is being drafted now, setting targets to 2025 and 2050.



GENERAL FUND - Public Works & Engineering

Department Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)
Revenue						
User Charges	438	371	442	391	398	405
	438	371	442	391	398	405
Expenditures (By Activity)						
Administration	784	828	731	899	935	966
City Garage	877	763	724	780	804	825
Public Transit	1,304	1,640	1,640	1,630	1,671	1,710
Roads & Sidewalks	3,579	3,598	3,609	3,683	3,725	3,813
	6,544	6,829	6,704	6,992	7,135	7,314
Net Revenue (Expenditures)	(6,106)	(6,458)	(6,262)	(6,601)	(6,737)	(6,908)
Expenditures (By Object)						
Wages & Benefits	2,625	2,843	2,708	2,997	3,077	3,151
Other O&M	4,713	4,849	4,859	4,937	5,027	5,155
Internal Recoveries	(794)	(863)	(863)	(942)	(969)	(993)
	6,544	6,829	6,704	6,992	7,135	7,314
Details of Other O&M						
General Services	1,584	1,892	1,903	1,909	1,958	2,003
Materials	493	495	503	524	536	548
Maintenance	64	64	64	66	68	69
Utility- Fuel	83	95	86	72	76	79
Utility- Power	1,040	1,039	1,039	959	937	965
Vehicle O&M & Fuel	656	401	401	467	485	500
Others	-	-	-	-	-	-
	3,919	3,986	3,996	3,995	4,058	4,162

GENERAL FUND - Public Works & Engineering

Directorate Budget	2014	2015	2015	2016	2017	2018
	Actual	Budget	Forecast	Budget	Budget	Budget
	(\$000's)	(\$000's)	(\$000's)	Approved	(\$000's)	(\$000's)
				(\$000's)		
Expenditures (By Activity)						
Legislation & Governance	78	83	73	90	94	97
Capital Planning	110	116	102	126	131	135
Project Management	118	124	109	135	140	145
Roads & Sidewalks	196	207	183	225	234	242
Water & Sewer	157	166	146	180	187	194
Public Transit	39	41	36	45	46	48
Drafting	86	91	80	99	103	106
	784	828	731	899	935	966
Net Revenue (Expenditures)	(784)	(828)	(731)	(899)	(935)	(966)
Expenditures (By Object)						
Wages & Benefits	748	785	680	856	891	922
Other O&M	36	43	50	43	44	44
	784	828	731	899	935	966
Details of Other O&M						
General Services	17	14	18	14	14	13
Materials	17	23	26	24	24	25
Maintenance	-	-	-	-	-	-
Utility- Fuel	-	-	-	-	-	-
Utility- Power	-	-	-	-	-	-
Vehicle O&M & Fuel	3	6	6	6	6	6
Others	-	-	-	-	-	-
	36	43	50	43	44	44



GENERAL FUND - Public Works & Engineering

City Garage Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)	Note
Expenditures (By Activity)							
Fleet Repair & Maintenance	1,465	1,422	1,386	1,512	1,560	1,602	
Maintenance Costs Allocated	(794)	(863)	(863)	(942)	(969)	(993)	(1)
Garage/Yard Maintenance	173	171	169	175	177	179	
Standby Generator Maintenance	33	33	32	34	35	36	
	<u>877</u>	<u>763</u>	<u>724</u>	<u>780</u>	<u>804</u>	<u>825</u>	
Net Revenue (Expenditures)	<u>(877)</u>	<u>(763)</u>	<u>(724)</u>	<u>(780)</u>	<u>(804)</u>	<u>(825)</u>	
Wages & Benefits	416	495	465	526	539	550	(2)
Other O&M	1,255	1,131	1,122	1,196	1,234	1,267	
Maintenance Costs Allocated	(794)	(863)	(863)	(942)	(969)	(993)	(1)
	<u>877</u>	<u>763</u>	<u>724</u>	<u>780</u>	<u>804</u>	<u>825</u>	
Details of Other O&M							
General Services	37	26	26	28	29	30	
Materials	68	50	50	55	57	59	
Maintenance	-	-	-	-	-	-	
Utility- Fuel	83	95	86	72	76	79	
Utility- Power	51	56	56	49	50	51	
Vehicle O&M & Fuel	223	42	42	50	53	55	
Others	-	-	-	-	-	-	
	<u>461</u>	<u>268</u>	<u>259</u>	<u>254</u>	<u>265</u>	<u>274</u>	

Note:

(1) This represents the vehicle O&M and fuel costs to be incurred by Fleet Management on behalf of other departments. The costs will be reallocated to other departments.

(2) One new Heavy Duty Mechanic from 2015 onwards

GENERAL FUND - Public Works & Engineering

Public Transit Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)	Note
Revenue							
User Charges	355	371	366	391	398	405	
	355	371	366	391	398	405	
Expenditures (By Activity)							
Transit Operations	1,304	1,640	1,640	1,630	1,671	1,710	(1)
Net Revenue (Expenditures)	(949)	(1,269)	(1,274)	(1,239)	(1,273)	(1,305)	
Expenditures (By Object)							
Other O&M	1,304	1,640	1,640	1,630	1,671	1,710	
	1,304	1,640	1,640	1,630	1,671	1,710	
Details of Other O&M							
General Services	1,286	1,630	1,630	1,621	1,661	1,700	(2)
Materials	10	5	5	4	4	4	
Maintenance	8	6	6	6	6	6	
Utility- Fuel	-	-	-	-	-	-	
Utility- Power	-	-	-	-	-	-	
Vehicle O&M & Fuel	-	-	-	-	-	-	
Others	-	-	-	-	-	-	
	1,304	1,640	1,640	1,630	1,671	1,710	

Note:

- (1) Transit contracted cost increases in 2015 as it increases services to Niven Lake subdivision and to the Stanton Territorial Hospital.
(2) Mostly transit contracted costs



GENERAL FUND - Public Works & Engineering

Public Transit Performance Measures	Projected 2014	Actual 2014	Projected 2015	Forecasted 2016	Forecasted 2017	Forecasted 2018	Notes
Workload Indicators							
No. of hours bus service provided	10,000	9,837	12,000	12,500	12,500	12,500	(1)
Annual ridership based on revenue	181,000	196,427	196,000	199,000	201,000	203,000	(2)
No. of hours accessible transit was provided	3,900	3,861	3,900	3,900	3,900	3,900	(3)
Annual ridership on accessible transit based on daily trip sheets	6,800	7,134	7,000	7,000	7,000	7,000	
Efficiency Measures							
Annual subsidized cost per capita	\$52.76	\$47.60	\$63.69	\$63.49	\$61.57	\$63.08	(4)
Annual revenue/cost ratio	0.23	0.27	0.22	0.24	0.24	0.24	(5)
Annual subsidized cost per capita (accessible transit)	\$10.54	\$12.79	\$12.52	\$13.19	\$13.50	\$13.79	(6)
Annual revenue/cost ratio (accessible transit)	0.08	0.06	0.07	0.07	0.06	0.06	(7)
Effectiveness Measures							
% of users very satisfied or somewhat satisfied with the overall transit system	86%	-	-	86%	86%	86%	(8)
Notes:							
(1) Changes to transit routes in September 2014 and September 2015.							
(2) The ridership in 2013 was 165,226.							
(3) Accessible transit started in September of 2005.							
(4) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was \$30.53 in 2012.							
(5) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was 0.34 in 2012.							
(6) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was \$11.39 in 2012.							
(7) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was 0.15 in 2012.							
(8) According to a Transit Survey in 2012, 84% were satisfied or somewhat satisfied with the overall transit service.							

GENERAL FUND - Public Works & Engineering

Roads & Sidewalks Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)	Note
Revenue							
User Charges	83	-	75	-	-	-	
	<u>83</u>	<u>-</u>	<u>75</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Expenditures (By Activity)							
Snow & Ice Control	1,279	1,308	1,092	1,155	1,181	1,206	
Street Maintenance	497	578	600	617	633	647	
Street Sweeping	258	192	301	325	333	341	
Storm/Ditch Maintenance	246	265	353	370	379	387	
Traffic Signals/Lighting/Marking	1,299	1,255	1,264	1,216	1,199	1,232	
	<u>3,579</u>	<u>3,598</u>	<u>3,609</u>	<u>3,683</u>	<u>3,725</u>	<u>3,813</u>	
Net Revenue (Expenditures)	<u>(3,496)</u>	<u>(3,598)</u>	<u>(3,534)</u>	<u>(3,683)</u>	<u>(3,725)</u>	<u>(3,813)</u>	
Expenditures (By Object)							
Wages & Benefits	1,461	1,563	1,563	1,615	1,647	1,679	
Other O&M	2,118	2,035	2,046	2,068	2,078	2,134	
	<u>3,579</u>	<u>3,598</u>	<u>3,609</u>	<u>3,683</u>	<u>3,725</u>	<u>3,813</u>	
Details of Other O&M							
General Services	245	222	229	246	253	259	(1)
Materials	398	418	422	441	451	460	
Maintenance	56	59	59	60	62	63	
Utility- Fuel	-	-	-	-	-	-	
Utility- Power	989	984	984	911	887	913	(2)
Vehicle O&M & Fuel	430	353	353	411	425	438	
Others	-	-	-	-	-	-	
	<u>2,118</u>	<u>2,035</u>	<u>2,046</u>	<u>2,068</u>	<u>2,078</u>	<u>2,134</u>	

Note:

- (1) Mostly road patching & snow removal contracted costs
- (2) Street and traffic lights



GENERAL FUND - Public Works & Engineering

Snow & Ice Control Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)
Snow Removal/Clearing						
General Services	51	41	41	53	55	56
Materials	4	1	1	1	1	1
	55	43	43	55	56	57
Vehicle O&M & Fuel	206	204	134	156	161	166
Labour	731	724	644	666	679	692
	991	971	821	876	896	916
General Services	-	-	-	-	-	-
Materials	168	204	203	208	212	216
	168	204	203	208	212	216
Vehicle O&M & Fuel	20	22	8	9	10	10
Labour	101	111	60	62	63	64
	288	337	271	279	285	290
	1,279	1,308	1,092	1,155	1,181	1,206

GENERAL FUND - Public Works & Engineering

Snow and Ice Control Performance Measures	Projected 2014	Actual 2014	Projected 2015	Forecasted 2016	Forecasted 2017	Forecasted 2018	Notes
Workload Indicators							
Annual snowfall (cm)	155	136	155	155	155	155	(1)
Lane/road kilometres maintained	203.53	203.53	205.97	210.44	210.44	210.44	
Efficiency Measures							
Cost per km of snow removed and cleared on roads and city streets	\$4,486	\$6,284	\$6,350	\$5,503	\$5,645	\$5,778	(2)
Effectiveness Measures							
% of citizens very satisfied or somewhat satisfied with winter road maintenance, including snow removal	77%	77%	-	-	-	-	
Notes:							
(1) Annual Snowfall:							
2008 199.0 cm							
2009 174.1 cm							
2010 124,8 cm							
2011 130 cm							
2012 140.8 cm							
2013 152 cm							
2014 136 cm							
(2) Cost per km includes ice control (winter sanding).							



GENERAL FUND - Public Works & Engineering

Street Maintenance Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)
General Services	-	-	-	-	-	-
Materials	18	31	31	27	27	28
	18	31	31	27	27	28
Vehicle O&M & Fuel	8	8	8	9	9	10
Labour	36	40	46	47	48	49
	62	79	85	83	85	87
General Services	-	-	-	-	-	-
Materials	13	16	16	16	16	17
	13	16	16	16	16	17
Vehicle O&M & Fuel	10	8	9	10	10	11
Labour	31	50	34	35	36	37
	54	74	59	62	63	64
Paved Road Maintenance						
General Services	153	153	153	157	161	165
Materials	75	77	77	78	80	82
	228	229	229	235	241	247
Vehicle O&M & Fuel	18	8	26	30	31	32
Labour	80	129	147	152	155	158
	326	366	402	416	427	436
Sidewalk Maintenance						
General Services	43	44	44	45	47	48
Materials	6	6	6	6	6	6
	49	50	50	51	53	54
Vehicle O&M & Fuel	1	1	1	1	1	1
Labour	5	8	4	5	5	5
	54	59	55	57	58	59
	497	578	600	617	633	647

GENERAL FUND - Public Works & Engineering

Street Maintenance Performance Measures	Projected 2014	Actual 2014	Projected 2015	Forecasted 2016	Forecasted 2017	Forecasted 2018	Notes
Workload Indicators							
Lane kms of paved roads	155.7	155.7	156.99	161.66	161.66	164.29	
Kms of paved roads – 2 lane							
Lane kms of paved alleys	8.37	8.37	8.37	8.37	8.37	8.37	
Lane kms of unpaved roads	29.54	29.54	30.69	30.49	30.49	27.86	
Lane kms of unpaved alleys	9.92	9.92	9.92	9.92	9.92	9.92	
Total	203.53	203.53	205.97	210.44	210.44	210.44	
Kms of roads reconstructed and new roads	3.084	2.803	3.739	6.18	1.628	4.230	(1)
Efficiency Measures							
Cost per km maintained – road/alley	\$2,518	\$2,442	\$2,913	\$2,941	\$3,120	\$3,089	
Note (1):							
2014 Reconstruct - 52 Avenue from 49 Street to 56 Street (610 m); Raccine / Ingraham / Doornbos (592 m)							
2014 Pave - DeWeerd Drive, Driscoll Road, Haener Drive (465 m) - gravel to pavement							
2014 Added gravel roads to maintain- Lemay Drive (314 m); Norseman Drive (498 m); Gibben Drive (66m); Hall Cres (258 m) - total 1,136 meters							
2015 Pave - Utsingi Drive, including Taltheilei Drive, Etthen Drive, Drybones tie-ins to Deh Cho Boulevard (1,150 m); Lemay Drive (144 m) - gravel to pavement							
2015 Added gravel roads to maintain - Hall Crescent (715 m); Stinson/Fairchild/Bellanca/Anson/Catalina (1,730 m) - total 2,445 meters							
2016 added paved road to maintain Highway 4, 49th Ave to Giant boat launch (3,653 m)							
2016 Reconstruct - Franklin Avenue, 41 Street to Wiley Road (697 m);							
2016 Pave - Etthen/Taltheilei/Cameron (1,015 m) - gravel to pavement							
2016 Added gravel roads to maintain - Hall Crescent (315 m), Grace Lake South (500 m)							
2017 Reconstruct - Kam Lake Road, Finlayson Drive to Deh Cho Boulevard (845 m)							
2017 Reconstruct/Pave - Old Highway #4, 49th Ave to Niven Gate (783 m)							
2018 Reconstruct - 52 Street, 52 Avenue to 51 Avenue overlay (184 m); 51 Street, 52 Avenue to 51 Avenue overlay (184 m); Otto Dive, Hearn Hill Park to Morrison Drive (484 m); Old Airport Road overlay (750 m)							
2018 Pave - Northlands (Norseman/Stinson/Fairchild/Bellanca/Anson/Catalina) (2,228 m); Cemetery Road (400 m) - total 2,628 m gravel to pavement							



GENERAL FUND - Public Works & Engineering

Street Sweeping	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)
Vehicle O&M & Fuel	112	57	106	124	128	132
Labour	146	136	194	201	205	209
	258	193	301	325	333	341

Street Sweeping Performance Measures	Projected 2014	Actual 2014	Projected 2015	Forecasted 2016	Forecasted 2017	Forecasted 2018	Notes
Workload Indicators							
Total paved roads/alleys/lanes (km)	164.1	164.7	165.4	170.0	170.0	172.7	
Lane kms							
Efficiency Measures							
Cost per km to street sweep	\$1,334	\$1,566	\$1,820	\$1,918	\$1,971	\$1,992	(1)
Sweeping includes parking lots, sweeping 7 days a week, bulk sand pickup and street washing.							
Notes:							
(1) Cost includes sweeping: labour, fuel and O&M costs.							

GENERAL FUND - Public Works & Engineering

Storm / Ditch Maintenance Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)
Ditch Maintenance						
General Services	13	13	13	14	14	15
Materials	7	3	3	3	3	3
	20	16	16	17	17	18
Vehicle O&M & Fuel	5	7	14	16	17	17
Labour	34	30	41	42	43	44
	58	53	71	75	77	79
Storm Sewer Maintenance						
General Services	3	3	3	3	3	3
Materials	16	28	28	29	29	30
	19	30	30	31	32	33
Vehicle O&M & Fuel	39	26	35	41	43	44
Labour	130	156	216	223	228	232
	188	212	282	295	302	308
	246	266	353	370	379	387



GENERAL FUND - Public Works & Engineering

Traffic Signals / Lighting / Marking Budget	2014 Actual (\$000's)	2015 Budget (\$000's)	2015 Forecast (\$000's)	2016 Budget Approved (\$000's)	2017 Budget (\$000's)	2018 Budget (\$000's)
General Services	-	-	-	-	-	-
Materials	36	30	35	36	37	37
	36	30	35	36	37	37
Vehicle O&M & Fuel	4	2	4	4	4	4
Labour	87	30	90	93	95	97
	127	62	128	133	136	138
Sign Maintenance						
General Services	-	1	1	1	1	1
Materials	50	19	19	30	31	32
	50	20	20	31	32	33
Vehicle O&M & Fuel	7	6	5	6	6	6
Labour	60	77	53	55	56	57
	117	103	78	91	94	96
Street Decorating						
General Services	7	6	12	12	13	13
Materials	6	5	5	9	10	10
	13	11	17	22	22	23
Vehicle O&M & Fuel	2	5	4	5	5	5
Labour	17	62	25	26	26	27
	32	78	46	52	53	54
Traffic & Street Lighting						
General Services	31	19	19	20	21	21
Power - Street lights	951	937	937	869	844	869
Power - Traffic lights	38	46	46	42	43	45
	1,020	1,003	1,003	931	907	935
Vehicle O&M & Fuel	0	1	0	0	0	0
Labour	3	8	8	9	9	9
	1,023	1,012	1,011	940	916	944
	1,299	1,255	1,264	1,216	1,199	1,232

GENERAL FUND - Public Works & Engineering

Traffic Signals/Lighting/Marking Performance Measures	Projected 2014	Actual 2014	Projected 2015	Forecasted 2016	Forecasted 2017	Forecasted 2018	Notes
Workload Indicators							
Street lights	1,592	1,592	1617	1630	1650	1670	
Traffic lights	18	18	18	18	19	19	(1), (2)
Pedestrian crosswalks	7	7	7	7	7	7	
Efficiency Measures							
Average yearly energy cost for street lighting	\$993,000	\$951,400	\$937,300	\$868,900	\$843,500	\$868,800	
Average yearly energy cost for traffic lights	\$34,800	\$37,500	\$46,200	\$42,000	\$43,300	\$44,600	(3)
(1) The traffic lights are in sets, therefore 18 sets of traffic lights totals 87 traffic lights.							
(2) 2017 Budget includes addition of traffic light at the intersection of Kam Lake Road and Finlayson Drive.							
(3) LED light installation completed in 2008, intersections to be metered. Actual power cost was reduced from \$83,000 in 2008 to \$37,500 in 2014.							

