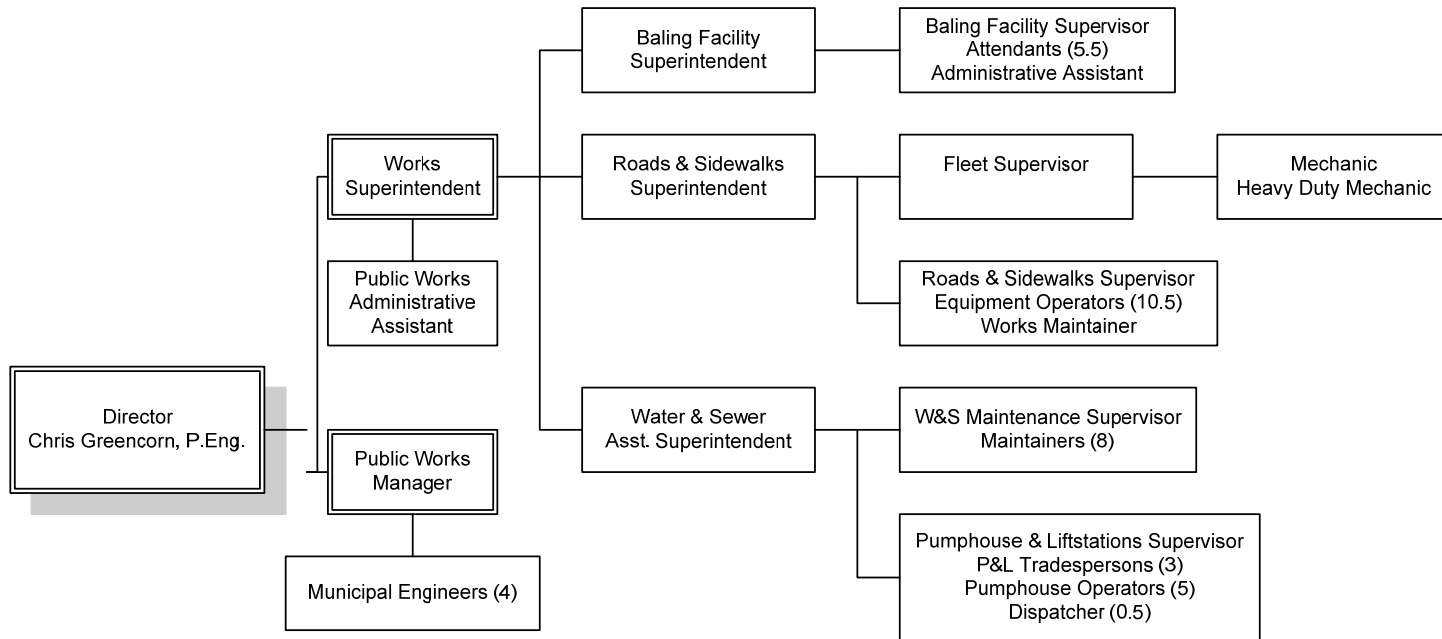


GENERAL FUND - Public Works & Engineering

DEPARTMENT STAFFING



Staffing Summary

	2013 Actual	2014 Budget	2014 Forecast	2015 Budget	2016 Budget	2017 Budget	Note
Directorate	7.00	8.00	7.00	7.00	7.00	7.00	(1)
City Garage	3.34	3.65	3.65	4.63	4.63	4.63	(2)
Roads and Sidewalks	14.54	14.54	15.04	14.58	14.58	14.58	(3)
Solid Waste Mgmt.	9.52	10.03	9.53	9.26	9.26	9.06	(3) & (4)
Water and Sewer	20.75	20.75	20.75	21.25	19.25	19.25	(5)
	55.15	56.97	55.97	56.72	54.72	54.52	
Permanent Positions	51.58	52.58	51.58	53.08	51.08	51.08	
Part-time/ Casual	3.57	4.39	4.39	3.64	3.64	3.44	
	55.15	56.97	55.97	56.72	54.72	54.52	

Note:

- (1) Starting from June 2014, Geomatics Officer reports to Information Technology.
- (2) One new HD Mechanic from 2015 onwards.
- (3) In 2014, 0.5 PY was transferred from Solid Waste Mgmt.
- (4) Facility Tradesperson from 2008 onwards = .08 PY
- (5) The cost of Senior Dispatcher has been shared equally with Fire & Ambulance Division.
Starting in 2015, this PY will be fully reported under Fire & Ambulance Division.
One additional maintainer will be 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.

2014 HIGHLIGHTS

Public Works & Engineering continued to managing unprecedented capital projects put in place in 2013, while also completing 2014 capital projects.

The 2013 construction season saw new challenges for the Public Works Department, specifically the Engineering Division. With City Staff completing the detailed design, tender, and resident engineering of Northlands, residents saved approximately \$1.5 million in professional engineering fees for the infrastructure upgrades project. In addition to the Northlands project, the Engineering Department awarded the largest capital project in the City's history - the Water Treatment Plant and Pumphouse #1 upgrades. Finally, the department saw large increases to annual paving and CMP (corrugated metal pipe) replacement projects.

The 2014 construction season held two challenging CMP replacement projects, one on Franklin Avenue near the Fire Hall, the other in the isolated cul-de-sac of Lanky Court. Each location had traffic implications and complexities that had to be carefully planned for, in order to minimize impact on residents, as Franklin Avenue is the main artery to the downtown core, and Lanky Court is a very dense, multi-family residential area. This season also saw the paving of several areas of town, most notably the reconstruction and beautification of 52nd Avenue, and the installation of a bike lane/multi-use path.

The 2014 highlights of the Public Works and Engineering Department are:

- With the departure of the Superintendent of Public Works at the City Garage, it was decided not to fill this position in 2014, but to hire an additional administrative assistant temporarily. With the implementation of the Cityworks program to track all activity costs, additional data entry support was required for each division of Public Works. The unutilized superintendent position provided the salary requirements for the second administrative position, while still allowing the City to realize savings of approximately \$60,000. The Superintendent position will remain in Public Works, as it is anticipated to be required at a future date
- The Engineering Division was not fully staffed until late 2014, yet the Manager and two Municipal Engineers still completed all required work for the season, at personal expense. When fully staffed (1 Manager, 4 Municipal Engineers), it is expected that in-house engineering services will save the City approximately \$400,000 annually in design and inspection fees
- Provided engineering and management services for the replacement of water and sewer mains and services on Lanky Court and Franklin Avenue (from Old Airport Road to approximately 70m past Norseman Drive). Both Lanky Court and Franklin Avenue required paving immediately upon completion of the water and sewer work. The design, engineering and management services for the paving portion of the work were completed by the Engineering Division. The total budget for this portion of the CMP Program was \$4.35 million
- Provided design, engineering and management services for upgrades to water and sewer infrastructure on 52nd Avenue (between 51st Street and 49th Street)



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- Provided engineering and management services for emergency upgrade to the sewer line on Forrest Drive
- Provided design, engineering and management services for the paving program, including the construction, reconstruction and landscaping of Bromley Drive, Bromley Court, Knutsen Court, Reservoir Road, Pilot's Monument, Taylor Road and 52nd Avenue. The total budget was \$3.31 million
- Provided engineering and management services for the paving of the remainder of Niven Phase VI (deWeerd Drive, Driscoll Road, Haener Drive). The total budget was \$800,000
- Provided design, engineering and management services for the Northlands Infrastructure Upgrade project. The total budget for this multi-year project is approximately \$16 million
- Provided engineering and management services for the construction phase of the new Water Treatment Plant
- Effectively managed project and reporting requirements for the City's Water Licence
- Designed and implemented new transit routes and schedules
- Effectively managed and maintained the entire traffic light system
- Provided engineering and technical advice daily to other City departments on a wide range of issues
- Oversee the full implementation of Cityworks for tracking of work orders and costs associated with all City forces related activities; develop specific outputs and reports associated with various tasks
- Update City Design Standards to current, best practices and industry standards. The last revision was 1987, and many practices have been revised or are no longer current
- Bring all current engineering services for annual capital paving and CMP projects in-house once the Northlands project is complete in 2015. The department will track and monitor staff time to compare with known consultant costs
- Review operations and staffing continuously to balance efficiency, effectiveness, job challenges, and work environment
- Manage the operation and maintenance activities for the City's infrastructure
- Provide input and staff resources to assist the planning and implementation of Works crew activities
- Assist in the administration of personnel matters involving commendations, hiring, performance reviews, discipline, etc.
- Enhance and maintain an accurate infrastructure database through computer technology, for use by City personnel
- Provide technical assistance to field personnel in terms of engineering expertise
- Manage the contracts between the City and the contractors who provide waste collection, sewage pickup, water delivery and public transit services
- Assess short and long-range capital infrastructure requirements and prioritize in accordance with Council direction
- Manage engineering/technical consultant input through requests for proposals and select appropriate firms in accordance with standards set by Council
- Direct/instruct/guide consultants throughout the pre-design and design work and review all pre-design reports and design/contract documents
- Draft and revise City contract documents as necessary, to reflect latest developments in Council policies and the law
- Supervise the tendering process
- Continue with planning and engineering work on new Water Treatment Plant and Pumphouse
- Supervise construction through daily contact with consultants and contractors and by attending all project meetings

2015/2016/2017 Goals

The goals of the Public Works & Engineering Department are to:

- Provide cost-effective and responsive municipal services to the public within the policies, objectives and budget, as outlined by City Council
- Manage the daily operation and maintenance of the City's infrastructure
- Manage the capital works program
- Provide a challenging and rewarding work environment
- Constantly monitor and evaluate existing practices, to seek improvements and close any gaps that may exist in current practices

2015/2016/2017 Objectives

The objectives of the Public Works & Engineering Department are to:

GENERAL FUND - Public Works & Engineering

- Avoid costly litigation through daily contact with consultants and contractors and by attending all project meetings
- Review and approve all progress payments and ensure claims are dealt with in accordance with contract terms
- Be responsive to public requests and questions
- Review traffic intersections to determine if the level of service requires modifications
- Undertake analysis of City streets and record results



GENERAL FUND - Public Works & Engineering

Department Budget				2015	2016	2017
	2013	2014	2014	Budget	Budget	Budget
	Actual	Budget	Forecast	Recommended	Budget	Budget
	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)
Revenue						
Government Transfer						
Other Grants	-	-	-	-	-	-
User Charges	341	320	403	371	373	375
	341	320	403	371	373	375
Expenditures (By Activity)						
Administration	1,019	973	828	828	866	893
City Garage	757	675	718	763	786	812
Public Transit	1,152	1,394	1,397	1,640	1,653	1,669
Roads & Sidewalks	3,351	3,532	3,547	3,598	3,600	3,604
	6,279	6,574	6,491	6,829	6,904	6,977
Net Revenue (Expenditures)	(5,937)	(6,254)	(6,088)	(6,457)	(6,531)	(6,602)
Expenditures (By Object)						
Wages & Benefits	2,800	2,851	2,631	2,842	2,942	3,024
Other O&M	4,170	4,565	4,702	4,849	4,842	4,857
Internal Recoveries	(692)	(842)	(842)	(863)	(880)	(904)
	6,279	6,574	6,491	6,829	6,904	6,977
Details of Other O&M						
General Services	1,372	1,649	1,667	1,892	1,912	1,935
Materials	476	480	518	495	504	513
Maintenance	59	62	64	64	66	67
Utility- Fuel	83	85	85	95	98	101
Utility- Power	1,059	1,080	1,082	1,039	974	914
Vehicle O&M & Fuel	430	368	446	401	409	422
Others	-	-	-	-	-	-
	3,479	3,723	3,860	3,986	3,962	3,953

GENERAL FUND - Public Works & Engineering

Directorate Budget				2015	2016	2017
	2013	2014	2014	Budget	2016	2017
	Actual	Budget	Forecast	Recommended	Budget	Budget
	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)
Revenue						
User Charges	-	-	-	-	-	-
	-	-	-	-	-	-
Expenditures (By Activity)						
Legislation & Governance	102	97	83	83	87	89
Capital Planning	143	136	116	116	121	125
Project Management	153	146	124	124	130	134
Roads & Sidewalks	255	243	207	207	216	223
Water & Sewer	204	195	166	166	173	179
Public Transit	51	49	41	41	43	45
Drafting	112	107	91	91	95	98
	1,019	973	828	828	866	893
Net Revenue (Expenditures)	(1,019)	(973)	(828)	(828)	(866)	(893)
Expenditures (By Object)						
Wages & Benefits	957	931	786	785	822	849
Other O&M	62	42	42	43	44	44
	1,019	973	828	828	866	893
Details of Other O&M						
General Services	31	13	13	14	14	13
Materials	27	23	23	23	24	24
Maintenance	-	-	-	-	-	-
Utility- Fuel	-	-	-	-	-	-
Utility- Power	-	-	-	-	-	-
Vehicle O&M & Fuel	4	6	6	6	7	7
Others	-	-	-	-	-	-
	62	42	42	43	44	44



CITY GARAGE

2014 Highlights

The highlights of the City Garage operations include:

- Purchased fleet equipment such as motor grader, heavy rescue truck, mini excavator, 60" riding mower, maintenance van, 1-ton flat deck truck, Zamboni, and an SUV for Municipal Enforcement Division
- Purchased new laptop and updated software for heavy equipment fleet diagnostics
- Upgraded Modis diagnostic equipment and software for light vehicle diagnostics
- Purchased new wheel alignment machine for use during regular servicing to ensure safety, reduce tire and front end wear, and to reduce the cost of contracting-out
- Continued migration to new, GIS-based Cityworks software
- Continued work on numerous updates related to occupational health and safety and National Fire Code
- Continued work on service standards and implementation to standardize cost tracking and services for Public Works activities
- Continued operational review of Division by an independent consultant to upgrade work monitoring and reporting to industry standards
- Continued to meet manufacturer-required equipment maintenance standards, despite staff shortages; made arrangements with a local contractor to take on overflow
- Increased maintenance standards on fire equipment to meet National Fire Code; due to heavy workload, work will continue to be contracted out
- Hired casual mechanics to help with maintenance tasks
- Replaced genset and transfer switch at Liftstation #9
- Continued to make use of the fuel monitoring program for City equipment in order to create more meaningful reports based on hours of use and kilometres travelled
- Installed new card lock security system on exterior doors for use with new City identification cards

2015/2016/2017 Goals

The goals of the City Garage are to:

- Maintain the City's fleet and stationary equipment such as standby

- generators, in proper working condition
- Shelter the City's fleet and properly maintain the City Garage, Stores, Carpentry Shop, Mechanics Shop, new parking garage, Operations & Maintenance divisional offices and training room
- Provide regular repairs and preventative maintenance service by qualified mechanics for the City's mobile equipment; investigate operating the Equipment Shop as a cost centre, under which mobile equipment would have an internal rental rate
- Monitor contracted repairs requested by user departments to ensure value for dollars
- Provide a base for the various Public Works divisions by:
 - stockpiling granular materials
 - having an inventory control area
 - using vehicle fuel fobs and employee identification cards to track fuel consumption by vehicle and department
- Track operational costs to identify additional opportunities for improvement

2015/2016/2017 Objectives

The objectives of the City Garage are to:

- Fully implement and manipulate data entered into Cityworks to produce reports on departmental activities
- Review staffing and evaluate departmental organization
- Provide preventative and service maintenance to City vehicles on a timely and cost-effective basis: check and service all equipment and light vehicles according to master schedule and capacity plan as a means of preventative maintenance. During such checks, mechanics examine tie rod ends, ball joints, exhaust systems, U joints, leaky seals, fluid levels, lights, tires and front-end alignment
- Provide priority maintenance to emergency vehicles
- In accordance with CSA standards, service diesel pumps and generators located at City facilities annually and perform repairs as requested (includes City Hall, Fire Hall, Multiplex, Ruth Inch Memorial Pool, Yellowknife Community Arena, Pumphouses and Liftstations, and City Garage)
- Provide equipment and labour to City departments on an as-required basis
- Maintain accurate records of fuel consumption for each City vehicle and encourage fuel conservation through reduced use, education and instilling a "turn-it-off" attitude

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- Maintain accurate records of parts and labour expended to service City equipment and recover costs from the client departments where applicable
- Maintain fleet gas and diesel fuel pumps, tanks and other accessories in good operating condition and fill fuel tanks as required
- Provide a healthy, safe and challenging work environment that promotes pride in workmanship
- Meet requirements of an occupational health and safety audit of buildings surrounding garage
- Where practical, continue to implement the suggestions made by the consultant hired for the operational review



GENERAL FUND - Public Works & Engineering

City Garage Budget				2015	2016	2017	
	2013	2014	2014	Budget	Budget	Budget	Note
	Actual	Budget	Forecast	Recommended	Budget	Budget	
	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	
Revenue							
Government Transfer							
Other Grants	-	-	-	-	-	-	
	-	-	-	-	-	-	
Expenditures (By Activity)							
Fleet Repair & Maintenance	1,255	1,320	1,360	1,423	1,459	1,506	
Maintenance Costs Allocated	(692)	(842)	(842)	(863)	(880)	(904)	(1)
Garage/Yard Maintenance	164	167	168	171	173	175	
Standby Generator Maintenance	29	30	31	33	33	34	
	757	675	718	763	786	812	
Net Revenue (Expenditures)							
	(757)	(675)	(718)	(763)	(786)	(812)	
Wages & Benefits	386	417	417	495	511	528	(2)
Other O&M	1,063	1,100	1,144	1,131	1,154	1,187	
Maintenance Costs Allocated	(692)	(842)	(842)	(863)	(880)	(904)	(1)
	757	675	718	763	786	812	
Details of Other O&M							
General Services	24	25	27	26	27	27	
Materials	49	48	57	50	50	51	
Maintenance	-	-	-	-	-	-	
Utility- Fuel	83	85	85	95	98	101	
Utility- Power	48	52	52	56	57	59	
Vehicle O&M & Fuel	167	48	82	42	43	44	
Others	-	-	-	-	-	-	
	371	258	302	268	275	283	

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

PUBLIC TRANSIT

2014 Highlights

The Public Transit highlights for 2014 include:

- Implemented new transit routes which increased the area served by transit. Implementation included:
 - Timing new routes
 - Determination of new bus stop locations
 - Creation of new printed transit schedules
 - Creation and installation of new individual bus stop schedules
 - Installation of new bus stops and shelters
 - Removal of old bus stops
- Continued advertising on the exterior and interior of regular transit buses
- Continued the Accessible Transit System (YATS) through a dedicated bus
- Received new low floor buses for both YATS and regular transit.
- Posted schedules for Folk on the Rocks busing at regular bus stops
- Gave out free passes at special events to encourage the use of public transportation
- Repaired bus shelters. Vandalism in the city continues to be a concern

2015/2016/2017 Goals

The goals of Public Transit are to:

- Increase public transit system ridership and reliability
- Increase public transit ancillary services such as signage and schedule availability
- Promote transit as an alternative to single vehicle trips
- Increase public transit revenues through marketing of advertising space on the buses

2015/2016/2017 Objectives

The objectives of Public Transit are to:

- Conduct monthly quality control meetings with the public transit contractor
- Review transit routes, schedules and fares yearly and implement amendments as deemed necessary
- Market the transit system to the public and various agencies throughout the city, with the objective of increasing revenues
- Market advertising space on the buses with the objective of increasing total public transit revenues
- Review public complaints and suggestions and work with contractor to remedy them
- Carry out regular customer surveys
- Manage the City's contract for the provision of public transit and monitor service provided (quality of service, invoicing, timing, condition of equipment, etc.)
- Maintain public transit-related facilities in good and clean condition (shelters, signs, posted schedules, advertising, etc.)



GENERAL FUND - Public Works & Engineering

Public Transit Budget				2015	2016	2017	
	2013	2014	2014	Budget	2016	2017	Note
	Actual	Budget	Forecast	Recommended	Budget	Budget	
	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	
Revenue							
Government Transfer							
Other Grants	-	-	-	-	-	-	
User Charges	324	320	320	371	373	375	
	324	320	320	371	373	375	
Expenditures (By Activity)							
Transit Operations	1,152	1,394	1,397	1,640	1,653	1,669	(1)
Net Revenue (Expenditures)	(828)	(1,074)	(1,078)	(1,269)	(1,280)	(1,294)	
Expenditures (By Object)							
Wages & Benefits	-	-	-	-	-	-	
Other O&M	1,152	1,394	1,397	1,640	1,653	1,669	
	1,152	1,394	1,397	1,640	1,653	1,669	
Details of Other O&M							
General Services	1,148	1,385	1,385	1,630	1,643	1,660	
Materials	4	4	5	5	4	4	
Maintenance	-	5	7	6	6	6	
Utility- Fuel	-	-	-	-	-	-	
Utility- Power	-	-	-	-	-	-	
Vehicle O&M & Fuel	-	-	-	-	-	-	
Others	-	-	-	-	-	-	
	1,152	1,394	1,397	1,640	1,653	1,669	

Note:

(1) Transit contracted cost increases as it increases services to Niven Lake subdivision and to the Stanton Territorial Hospital.

GENERAL FUND - Public Works & Engineering

Public Transit Performance Measures

	Projected 2013	Actual 2013	Projected 2014	Forecasted 2015	Forecasted 2016	Forecasted 2017	Notes
Workload Indicators							
No. of hours bus service provided	9,200	9,065	10,000	12,100	12,100	12,100	(1)
Annual ridership based on revenue	180,000	165,226	181,000	196,000	199,000	201,000	(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	6,029	6,800	6,800	6,800	6,800	
Efficiency Measures							
Annual subsidized cost per capita	\$49.46	\$40.80	\$52.76	\$61.77	\$61.92	\$62.26	(4)
Annual revenue/cost ratio	0.24	0.28	0.23	0.23	0.23	0.22	(5)
Annual subsidized cost per capita (accessible transit)	\$12.37	\$10.97	\$10.54	\$12.19	\$12.23	\$12.28	(6)
Annual revenue/cost ratio (accessible transit)	0.07	0.05	0.08	0.07	0.07	0.07	(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 starting in September 2014.							
(2) The ridership in 2007 was 162,000.							
(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 \$32.38 in 2011.							
(5) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was 0.38 in 2011.							
(6) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was \$19.18 in 2011.							
(7) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was 0.08 in 2011.							
(8) According to a Transit Survey in 2012, 84% were satisfied or somewhat satisfied with the overall transit service.							



ROADS & SIDEWALKS

2014 Highlights

The highlights for the Roads & Sidewalks Division include:

- Reduction of dust (airborne particles) through:
 - Timely snow removal, including downtown alleys and City-owned parking lots
 - Concentrated effort of street sweeping in the spring and summer using three sweepers during peak time and one sweeper during the summer, in order to reduce buildup of windblown litter and debris
 - Hand sweeping of City-owned sidewalks and medians
 - Wash streets in the downtown core using a vactor truck to further reduce airborne dust particles
 - Use of calcium chloride on gravel roads and alleys for dust control
- Clearing snow and applying ice melt on Franklin Avenue alleyway intersections, City bus shelters and sidewalks adjacent to City properties
- Maintenance and repair of 81.6 km of paved and chip-sealed roads , 24.4 km of gravel roads and 62.6 km of sidewalks
- Maintenance and repair of 18 sets of traffic lights and 4 sets of pedestrian crossing lights
- Maintenance and repair of 2,351 traffic signs, 329 parking meters, pedestrian crossing lights and pedestrian crossing buttons
- Provision of construction equipment to Water & Sewer Division as required for replacement of water and sewer services, water and sewer mains, as well as repair of water breaks and surface water lines
- Provision of construction equipment to Community Services Department as required for cemetery services, trail and park maintenance
- Assisting and supplying equipment and materials to Solid Waste Facility as needed
- Assist Planning and Lands with drainage ditch in Grace Lake subdivision, Bristol Pit site remediation and the relocation of storage sheds on 44th Street
- Installation of new signs and barriers as per request
- Maintenance and repairs to City storm sewer system
- Pruning trees to remove obstructive and unsafe branches and limbs hanging over sidewalks, roads and street signs
- Resurfacing gravel roads when needed
- Clearing brush from ditches to promote positive drainage
- Installation and removal of pumps in spring and fall to dewater areas with drainage issues
- Camera inspection of boat launch landing pads every two years to detect washouts at the end of ramps
- Carrying out spring and fall cleanup by picking up bulky waste at request of residents
- Maintenance of the sewage lagoon, including the construction of new cells for honey bags and coverage for existing cells
- Installation and removal of the floating curtain under the McMeekan Causeway in order to promote ice formation
- Installation and removal of dock at City boat launch
- Providing support and supplying barricades and signage for special events such as the Santa Claus Parade, Canada Day Parade, Aboriginal Day, Terry Fox Run, Run for the Cure, Old Town Ramble and Ride, and the Bike Rodeo
- Installation of Christmas silhouettes on Franklin Avenue downtown
- Installation and repair of Christmas lights and banners on streetlights on Old Airport Road, Wiley Road and in Downtown Core
- Maintenance and repair of 28 bus shelters including glass replacement, cleaning, and painting of older faded shelters
- Rebuild two bus shelters due to vehicular damage and replace 18 panes of glass; vandalism continues to be a problem
- Installation of new bus route signs throughout the City, including new route and two new bus shelters in Niven
- Cleaning up Kam Lake boat launch and area for annual fishing derby
- Resurfacing or replacing city sidewalks that were in poor shape, especially downtown, and perform yearly inspections
- Cleaning up, or assisting with the cleanup, of any oil contaminants on streets and City properties
- Repair and maintenance of Giant Mine boat launch and access road
- Water sampling on major storm outfalls three times per year
- Continue repair of small potholes and asphalt surface breakage with cold mix
- Cleanup of debris in parking area of Esso bulk station
- Crack sealing on asphalt surfaces to prolong asphalt life expectancy

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- Cleaning up and blocking off areas and sandpits to reduce dumping of refuse in off-road areas
- Overlaying areas on Priority #1 and #2 roads to cover surface rutting and breakage, to promote a safe driving surface
- Removing heaved asphalt in residential areas that draws complaints of vehicles bottoming out in front of driveways
- Continuing to install, remove and monitor trash separator at School Draw Avenue outfall
- Install new sea-can in City yard for Fire Division storage and install new sea-can behind Fire Hall for storage
- Patching lower priority areas with cold mix to reduce contracted costs
- Hauling used street sweepings to landfill and lagoon to use as road cover and cell cover material
- Updating City service standards to accurately reflect staff hours, cost and duration of tasks at hand

2015/2016/2017 Goals

The goals for the Roads & Sidewalks Division are to:

- Provide safe roads for residents
- Provide equipment and labour to other divisions and departments when required (especially Water & Sewer)
- Provide winter road maintenance, snow-plowing, snow-removal and ice-control
- Provide street sweeping and dust control services to reduce airborne dust particles
- Provide road maintenance and repairs to prolong pavement life expectancy
- Provide sidewalk maintenance to reduce possible tripping hazards
- Maintain storm drain system and ditches to promote positive water flow
- Maintain street signs, traffic lights, and bus shelters for public safety and public transit
- Provide a safe, team-oriented atmosphere for Roads & Sidewalks Division staff

2015/2016/2017 Objectives

The objectives for the Roads & Sidewalks Division are to:

- Monitor work performance using Cityworks software to determine most efficient use of labour and equipment
- Promote safe work procedures
- Promote vehicle inspections by operators to maintain control of breakdown repairs
- Provide year-round 24-hour call-out services



GENERAL FUND - Public Works & Engineering

Roads & Sidewalks Budget				2015 Budget Recommended (\$000's)	2016 Budget (\$000's)	2017 Budget (\$000's)
	2013 Actual (\$000's)	2014 Budget (\$000's)	2014 Forecast (\$000's)			
Revenue						
User Charges	17	-	83	-	-	-
	17	-	83	-	-	-
Expenditures (By Activity)						
Snow & Ice Control	1,153	1,251	1,253	1,308	1,342	1,376
Street Maintenance	550	563	555	578	593	607
Street Sweeping	168	181	181	192	198	203
Storm/Ditch Maintenance	240	252	252	265	273	279
Traffic Signals/Lighting/Marking	1,241	1,285	1,306	1,255	1,195	1,139
	3,351	3,532	3,547	3,598	3,600	3,604
Labour & Vehicle O&M Allocation	(1,717)	(1,816)	(1,786)	(1,916)	(1,970)	(2,019)
	1,635	1,716	1,761	1,683	1,630	1,585
Net Revenue (Expenditures)	(1,618)	(1,716)	(1,678)	(1,683)	(1,630)	(1,585)
Expenditures (By Object)						
Wages & Benefits	1,458	1,503	1,428	1,563	1,609	1,648
Other O&M	1,894	2,029	2,119	2,036	1,990	1,956
	3,351	3,532	3,547	3,598	3,600	3,604
Details of Other O&M						
General Services	169	226	242	223	229	235
Materials	397	405	433	418	425	434
Maintenance	59	57	57	59	60	62
Utility- Fuel	-	-	-	-	-	-
Utility- Power	1,011	1,028	1,030	984	917	855
Vehicle O&M & Fuel	259	313	358	354	360	371
Others	-	-	-	-	-	-
	1,894	2,029	2,119	2,036	1,990	1,956

SNOW & ICE CONTROL

2015/2016/2017 Goals

The goals of the Snow & Ice Control Division are to:

- Provide a cost-effective, safe, and reliable municipal transportation system during the winter months through the use of three primary activities: snowplowing, road sanding (ice control), and snow removal

2015/2016/2017 Objectives

The objectives of the Snow & Ice Control Division are to:

- Remove snow from major thoroughfares and intersections before ice and snow accumulations cause the roadway to become unsafe
- Remove snow from residential streets, sidewalks, and alleys at least once a year and remove snow from the downtown streets and sidewalks at least twice a year
- Update road priority system annually, especially as new City streets are added; incorporate new streets into winter maintenance plans
- Maintain paved roads through snow clearing, snow removal, and sanding
- Maintain gravel roads through grading, plowing and sanding
- Tender annual requirements for winter street sand to achieve an acceptable balance among cost, preferred rock type, and public satisfaction with road sanding
- Maintain roads and parking lots at City facilities; includes snow removal from the Fire Hall, City Hall, Ruth Inch Memorial Pool, pumphouses, liftstations, arenas, the Fieldhouse, cemetery, and Pumphouse #2 located at the Yellowknife River
- Use road salt mixture in treacherous conditions in spring and fall on major intersections to reduce ice buildup
- Clear sidewalks of snow and ice adjacent to City-owned properties
- Remove snow and apply ice melt at City bus shelters
- Remove snow and apply ice melting material to sidewalks at alley entrances, to reduce ice buildup in downtown core along Franklin Avenue
- Provide 24-hour call-out service for snowstorms or slippery roads



GENERAL FUND - Public Works & Engineering

Snow & Ice Control Budget				2015 Budget Recommended (\$000's)	2016 Budget (\$000's)	2017 Budget (\$000's)
	2013 Actual (\$000's)	2014 Budget (\$000's)	2014 Forecast (\$000's)			
Snow Removal/Clearing						
General Services	4	40	54	41	42	43
Materials	1	1	1	1	1	1
	5	41	55	43	44	45
Vehicle O&M & Fuel	150	181	207	204	209	215
Labour	676	697	662	724	746	764
	830	920	924	971	998	1,023
Winter Sanding						
General Services	-	-	-	-	-	-
Materials	203	205	205	204	207	212
	203	205	205	204	207	212
Vehicle O&M & Fuel	16	20	23	22	23	23
Labour	103	106	101	111	114	117
	323	331	329	337	343	352
	1,153	1,251	1,253	1,308	1,342	1,376

GENERAL FUND - Public Works & Engineering

Snow and Ice Control Performance Measures

	Projected 2013	Actual 2013	Projected 2014	Forecasted 2015	Forecasted 2016	Forecasted 2017	Notes
Workload Indicators							
Annual snowfall (cm)	150	152	155	155	155	155	(1)
Lane/road kilometres maintained	202.11	202.11	203.53	203.53	203.53	203.53	
Efficiency Measures							
Cost per km of snow removed and cleared on roads and city streets	\$6,268	\$4,310	\$4,486	\$4,621	\$4,746	\$4,889	(2)
Effectiveness Measures							
% of citizens very satisfied or somewhat satisfied with winter road maintenance, including snow removal			77%				(3)
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					
(2)	Cost per km includes ice control (winter sanding). 2014 - 1417 meters of road added for maintenance						
(3)	2014 survey showed 77% of citizens were satisfied with winter road maintenance						



STREET MAINTENANCE

2015/2016/2017 Goals

The goals of the Street Maintenance Division are to:

- Provide safe travel in the city for our residents, whether walking or driving, in a cost-effective manner
- Maintain all roads and sidewalks in a reasonable operating condition
- Carry out line painting and road markings to delineate traffic lanes, stop lines and pedestrian crosswalks for public safety and to reduce contracted costs
- Seal cracks in asphalt surfaces to increase pavement life expectancy and reduce contracted costs
- Provide equipment operations for other Public Works & Engineering divisions and City departments where needed in a timely, efficient, and cost-effective manner

2015/2016/2017 Objectives

The objectives of the Street Maintenance Division are to:

- Inspect roads, streets and sidewalks regularly to determine which areas require repairs or maintenance; effect necessary repairs on a priority basis
- Provide emergency 24-hour call-out service for road maintenance/repairs throughout the year
- Maintain paved roads by patching potholes, resurfacing depressions with cold mix, sealing cracks and reconstruction
- Maintain gravel roads through grading, resurfacing, reconstruction, and the application of dust suppressant
- Work closely with the Engineering Division so that Roads & Sidewalks staff can prepare more patches, thus avoiding the expense of hiring a paving contractor to carry out this task

GENERAL FUND - Public Works & Engineering

Street Maintenance Budget				2015	2016	2017
	2013	2014	2014	Budget	2016	2017
	Actual	Budget	Forecast	Recommended	Budget	Budget
	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)
Dust Control						
General Services	-	-	-	-	-	-
Materials	36	31	31	31	32	33
	36	31	31	31	32	33
Vehicle O&M & Fuel	6	7	8	8	8	8
Labour	38	39	37	40	41	42
	79	76	75	79	81	83
Gravel Road Maintenance						
General Services	-	-	-	-	-	-
Materials	12	16	16	16	16	16
	12	16	16	16	16	16
Vehicle O&M & Fuel	6	7	8	8	8	8
Labour	47	48	46	50	52	53
	65	71	69	74	76	78
Paved Road Maintenance						
General Services	150	153	153	153	157	161
Materials	74	75	75	77	78	80
	224	228	228	229	235	241
Vehicle O&M & Fuel	6	7	8	8	8	8
Labour	120	124	118	129	133	136
	350	359	354	366	376	385
Sidewalk Maintenance						
General Services	42	43	43	44	45	47
Materials	5	6	6	6	6	6
	47	49	49	50	51	52
Vehicle O&M & Fuel	1	1	1	1	1	1
Labour	8	8	8	8	9	9
	56	57	57	59	61	62
	550	563	555	578	593	607



GENERAL FUND - Public Works & Engineering

Street Maintenance Performance Measures	Projected 2013	Actual 2013	Projected 2014	Forecasted 2015	Forecasted 2016	Forecasted 2017	Notes
Workload Indicators							
Lane kms of paved roads	155.23	155.23	155.7	156.85	157.31	157.31	
Lane kms of paved alleys	8.37	8.37	8.37	8.37	8.37	8.37	
Lane kms of unpaved roads	28.59	28.59	29.54	28.39	27.93	27.93	
Lane kms of unpaved alleys	9.92	9.92	9.92	9.92	9.92	9.92	
Total	202.11	202.11	203.53	203.53	203.53	203.53	
Kms of roads reconstructed and new roads	2.367	2.367	3.084	1.818	1.345	1.029	(1)
Efficiency Measures							
Cost per km maintained -- road/alley	\$2,917	\$2,445	\$2,518	\$2,594	\$2,671	\$2,751	
Notes:							
(1)	2013 Reconstruct - Deh Cho Boulevard (1,196 m); Morrison Drive (723 m) and Ndilo (448 m)						
	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 (209 m); Norseman Drive (498 m); Gibben Drive (383 m); Hall Cres (327 M) - total 1,417 meters						
	2015 Reconstruct - 50 Street, 52 Avenue to 51 Avenue (184 m); Otto Drive Hearn Hill Park to Morrison Drive (484 m)						
	2015 Pave - Utsingi Drive, including Taltheilei Drive, Etthen Drive, Drybones tie-ins to Deh Cho Boulevard (1,150 m) - gravel to pavement						
	2016 Reconstruct - Franklin Avenue, 41 Street to Wiley Road (697 m); 52 Street, 52 Avenue to 51 Avenue overlay (184 m)						
	2016 Pave - Cemetery Road (464 m) - gravel to pavement						
	2017 Reconstruct - Kam Lake Road, Finlayson Drive to Deh Cho Boulevard (845 m) 51 Street, 52 Avenue to 51 Avenue overlay (184 m)						

STREET SWEEPING

2014 Highlights

The highlights of 2014:

- Sweep downtown core daily and on weekends and holidays to reduce debris buildup
- Wash downtown streets as early as possible in the spring to reduce airborne dust particles

2015/2016/2017 Goals

The goals of the Street Sweeping Division are to:

- Carry out spring cleanup activities with the intent of reducing dust generation
- Reduce dust generation through investigation and trial of alternatives

2015/2016/2017 Objectives

The objectives of the Street Sweeping Division are to:

- Remove dust and debris from streets as quickly as is practical, particularly following spring thaw, to reduce suspended particles in the air. The level of dust has decreased in the past few years, as reported by the GNWT in its Air Quality Report (ENR)
- Continue to sweep throughout summer and as late as possible in the fall to minimize buildup of gravel and debris on city streets



GENERAL FUND - Public Works & Engineering

	2013 Actual (\$000's)	2014 Budget (\$000's)	2014 Forecast (\$000's)	2015 Budget Recommended (\$000's)	2016 Budget (\$000's)	2017 Budget (\$000's)
Street Sweeping						
General Services	-	-	-	-	-	-
Materials	-	-	-	-	-	-
Vehicle O&M & Fuel	41	50	57	57	58	59
Labour	127	131	124	136	140	143
	168	181	181	192	198	203

Street Sweeping Performance Measures

	Projected 2013	Actual 2013	Projected 2014	Forecasted 2015	Forecasted 2016	Forecasted 2017	Notes
Workload Indicators							
Total paved roads/alleys/lanes (km)	163.6	163.6	164.1	165.2	165.7	165.7	
Efficiency Measures							
Cost per km to street sweep	\$1,516	\$1,295	\$1,334	\$1,374	\$1,415	\$1,415	(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.							

STORM / DITCH MAINTENANCE

2014 Highlights

The highlights for Storm/Ditch Maintenance include:

- Cleared out debris, cut and sloped trenches to promote positive water flow on major outfalls
- Cleared debris from open ditches to promote positive water flow
- Cleaned and flushed catch basins and storm mains to provide a clean and workable storm system
- Cleaned trash septon on School Draw outfall and monitored debris collected twice yearly
- Marked all culvert ends to reduce damage in spring when locating culvert end is necessary
- Maintained and installed plates with fish symbols to raise public awareness that what goes into the city's storm sewers goes into our lakes and affects aquatic life
- Perform water sampling at major outfalls three times a year

2015/2016/2017 Goals

The goal of the Storm/Ditch Maintenance Division is to:

- Maintain a well-drained storm sewer system, including ditches, to promote positive drainage
- Clean and wash out all catch basins to reduce debris that would otherwise enter storm mains
- Flush storm mains to promote positive water flow and reduce thawing time in the spring
- Continue to perform water sampling three times a year

2015/2016/2017 Objectives

- Flush the underground storm sewer system annually and repair or replace any damaged or defective structural components
- Remove overgrown vegetation and accumulated sediment and debris from system
- Carry out maintenance and thawing of storm sewers as required
- Upgrade ditching in the Kam Lake Industrial Park by providing new ditching and drainage where necessary



GENERAL FUND - Public Works & Engineering

Storm / Ditch Maintenance Budget	2013 Actual (\$000's)	2014 Budget (\$000's)	2014 Forecast (\$000's)	2015 Budget Recommended (\$000's)	2016 Budget (\$000's)	2017 Budget (\$000's)
Ditch Maintenance						
General Services	16	13	13	13	14	14
Materials	2	3	5	3	3	3
	18	16	18	16	17	17
Vehicle O&M & Fuel	5	6	7	7	7	7
Labour	28	29	28	30	31	32
	50	50	52	53	54	56
Storm Sewer Maintenance						
General Services	3	1	3	3	3	3
Materials	22	28	28	28	29	29
	25	29	31	30	31	32
Vehicle O&M & Fuel	19	23	26	26	27	27
Labour	145	150	143	156	161	164
	189	202	199	212	218	224
	240	252	252	265	273	279

TRAFFIC SIGNALS / LIGHTING / MARKING

2014 Highlights

The Traffic Signals/Lighting/Marking Division highlights include:

- Completed annual maintenance on traffic light cabinets and hardware
- Performed monthly preventative maintenance checks to ensure signals working properly
- Installed camera detection system at the intersections of Matonabee Street and Franklin Avenue and Borden Drive (North) and Old Airport Road
- Painting curbs for no parking zones on corners and by fire hydrants in the downtown area
- Painting of new bike lane lines on Deh Cho Boulevard, 52nd Avenue and Franklin Avenue
- Provision of line painting throughout the city for traffic control and public safety

2015/2016/2017 Goals

The goals of the Traffic Signals/Lighting/Marking Division are to:

- Carry out yearly inspections of traffic lights
- Maintain traffic control systems in good operating condition
- Improve traffic flow along Franklin Avenue between Old Airport Road and the Central Business District by coordinating the timing of traffic lights
- Improve communication and detection of problem intersections
- Update traffic light controllers, vehicle detection methods, and software
- Continue monthly preventative maintenance checks and perform repairs as required

2015/2016/2017 Objectives

The objectives of the Traffic Signals/Lighting/Marking Division are to:

- Install signs within the city in accordance with relevant standards and legislation
- Carry out traffic counts to determine modifications needed at

- existing intersections
- Install and maintain traffic control systems
- Inspect city streetlights on a regular basis and notify the utility company of problems
- Coordinate the hanging of banners and Christmas decorations in the city
- Administer the closure of roads for special events
- Establish truck routes within the city limits
- Perform street line painting as required on an annual basis
- Repaint traffic light poles when necessary
- Identify locations and install pedestrian crosswalks
- Improve traffic circulation by revising the program that controls timing of traffic lights
- Record location of street signs and track them when necessary using GPS technology



GENERAL FUND - Public Works & Engineering

Traffic Signals/Lighting/Marking Budget				2015	2016	2017
	2013	2014	2014	Budget	Budget	Budget
	Actual	Budget	Forecast	Recommended		
	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)
Line Painting						
General Services	-	-	-	-	-	-
Materials	21	20	33	30	30	30
	21	20	33	30	30	30
Vehicle O&M & Fuel	2	2	2	2	2	2
Labour	28	29	28	30	31	32
	51	51	63	62	63	64
Sign Maintenance						
General Services	1	1	1	1	1	1
Materials	18	17	28	19	20	20
	19	18	29	20	21	21
Vehicle O&M & Fuel	4	5	6	6	6	6
Labour	72	74	71	77	79	81
	95	97	105	103	106	109
Street Decorating						
General Services	3	12	12	6	6	6
Materials	4	4	4	5	5	6
	7	16	16	11	11	12
Vehicle O&M & Fuel	4	4	5	5	5	5
Labour	58	60	57	62	64	65
	68	80	78	78	80	82
Traffic & Street Lighting						
General Services	7	20	22	19	20	20
Power - Street lights	975	993	993	937	869	806
Power - Traffic lights	36	35	37	46	48	49
	1,018	1,048	1,051	1,003	936	875
Vehicle O&M & Fuel	0	1	1	1	1	1
Labour	8	8	8	8	9	9
	1,026	1,057	1,060	1,012	945	884
	1,241	1,285	1,306	1,255	1,195	1,139

GENERAL FUND - Public Works & Engineering

Traffic Signals/Lighting,/Marking Performance Measures

	Projected 2013	Actual 2013	Projected 2014	Forecasted 2015	Forecasted 2016	Forecasted 2017	Notes
Workload Indicators							
Street lights	1,573	1,573	1,592	1,611	1,630	1,650	
Traffic lights	18	18	18	18	18	18	(1)
Pedestrian crosswalks	7	7	7	7	7	7	
Efficiency Measures							
Average yearly energy cost for street lighting	\$1,000,000	\$974,645	\$993,000	\$937,300	\$868,900	\$805,500	
Average yearly energy cost for traffic lights	\$36,200	\$35,930	\$34,800	\$35,700	\$37,000	\$38,480	(2)

Notes:

(1) The traffic lights are in sets, therefore 18 sets of traffic lights totals 87 traffic lights.

(2) LED light installation completed in 2008, intersections to be metered. Actual power cost was reduced from \$83,000 in 2008 to \$36,100 in 2013.

