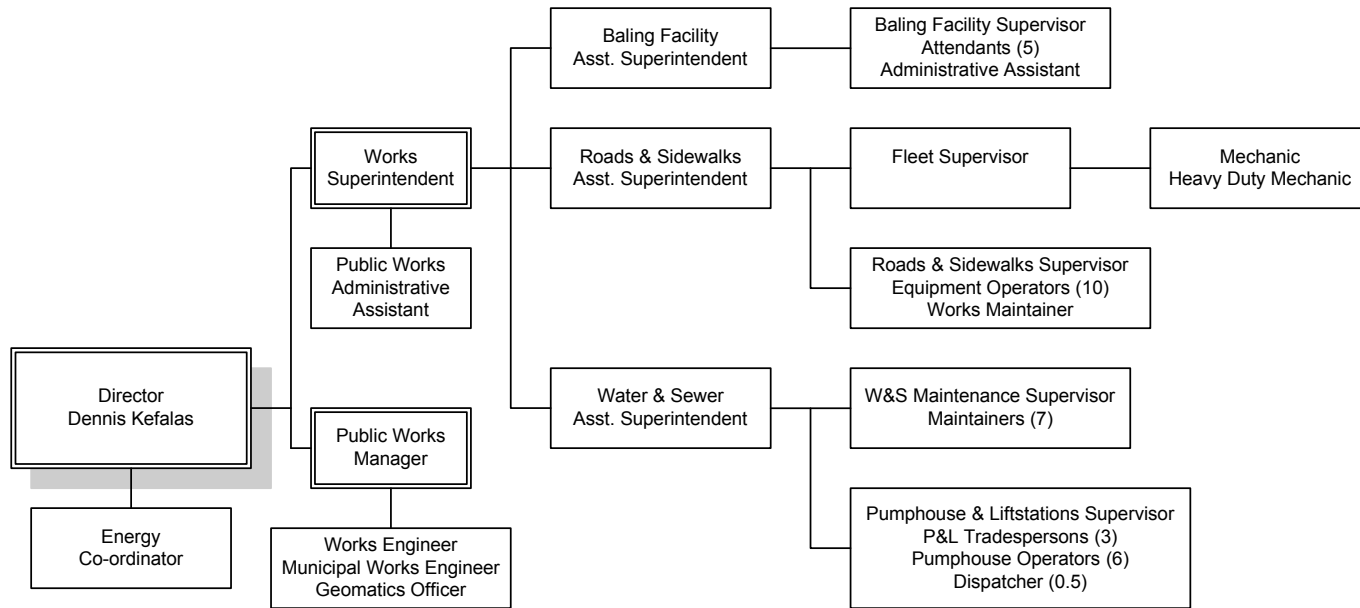


GENERAL FUND - Public Works & Engineering

DEPARTMENT STAFFING



Staffing Summary

	2001 Actual	2002 Actual	2003 Actual	2004 Actual	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Budget	2014 Budget	2015 Budget	Note
Directorate	8.33	8.33	8.33	8.33	8.42	8.38	8.36	8.35	8.33	8.00	8.00	7.00	7.31	7.30	7.30	
City Garage	3.00	2.00	2.00	3.00	3.00	3.09	3.08	3.18	3.10	3.10	3.34	3.34	3.34	3.34	3.34	
Roads and Sidewalks	11.55	11.55	12.22	12.27	12.60	12.26	13.09	14.46	14.54	14.80	14.77	14.54	14.54	14.54	14.54	(1)
Solid Waste Mgmt.	6.50	6.83	7.66	7.66	7.33	8.40	8.31	8.39	8.89	8.89	8.39	9.08	9.52	9.52	9.52	(2)
Water and Sewer	20.00	20.67	20.00	20.00	20.00	19.79	20.29	20.24	19.81	20.98	20.98	20.75	20.75	20.75	20.75	(3)
	49.38	49.38	50.21	51.26	51.35	51.92	53.13	54.62	54.67	55.77	55.48	54.71	55.46	55.45	55.45	
Permanent Positions	46.00	46.00	47.00	48.00	48.00	49.00	50.00	51.18	51.18	51.68	51.58	50.58	50.58	50.58	50.58	
Part-time/ Casual	3.38	3.38	3.21	3.26	3.35	2.92	3.13	3.44	3.49	4.09	3.90	4.13	4.88	4.87	4.87	
	49.38	49.38	50.21	51.26	51.35	51.92	53.13	54.62	54.67	55.77	55.48	54.71	55.46	55.45	55.45	

Note:

- (1) One Equipment Operator from 2008 onwards.
- (2) Facility Tradesperson in 2008 onwards = .08 PY.
- (3) One full-time dispatcher from April 2010 onwards and the cost is to be shared equally with Fire & Ambulance Division.

GENERAL FUND - Public Works & Engineering

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, such as piped or trucked sewer and water services to all residents, garbage collection, maintenance and repair of the City's roadways and sidewalks and vehicle servicing to 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.

2012 HIGHLIGHTS

Highlights of the Public Works & Engineering Department include:

- Provided engineering for the replacement of water and sewer mains and water and sewer services on Matonabee Ave. The total budget was \$3.2 million.
- Provided engineering and management for the construction, reconstruction, and landscaping of Moyle Drive, Findlay Point, McMahon Court, Stirling Court, Lyons Point, 54th Avenue, 41A Avenue and Fieldhouse parking area. The total budget was approximately \$3.3 million.
- Provided engineering and management services for the Grace Lake Boulevard land development project. The total budget was approximately \$0.8 million.
- Participated in the Solid Waste Management Advisory Committee

- Provided engineering and management services for the design and construction of replacement piping for Pumphouse #4. The total budget was approximately \$1.1 million.
- Completed analysis of existing transit routes and ongoing ridership data collection
- Completed water source selection process of the Water Treatment Plant project; conducted public meetings.
- Provided engineering and management for the design phase of the Water Treatment Plant, as well as the access road required to develop the site; prepared and advertised water treatment process selection and awarded contract to successful proponent for the supply of the membrane treatment process.
- 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
- Provided engineering and management services for the construction of a new parking garage. The total budget was approximately \$0.9 million.
- Participated and presented at the Mackenzie Valley Impact Review Board hearings on Giant Mine Remediation; participated in a working group assembled to discuss establishment of an independent committee on oversight for the Giant Mine remediation project.

2013/2014/2015 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.



2013/2014/2015 Objectives

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

- Review operations and staffing constantly 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 through computer technology an accurate infrastructure database 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 a new water treatment plant and pumphouse
 - Supervise construction through daily contact with consultants and contractors and by attending all project meetings
 - 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

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Revenue						
Government Transfer						
Other Grants	-	-	-	-	-	-
User Charges	341	373	358	341	345	348
	341	373	358	341	345	348
Expenditures (By Activity)						
Administration	1,084	1,096	1,041	981	999	1,021
City Garage	876	575	597	604	613	626
Public Transit	1,064	1,083	1,107	1,288	1,300	1,314
Roads & Sidewalks	3,304	3,459	3,601	3,665	3,714	3,772
	6,328	6,213	6,346	6,537	6,626	6,734
Net Revenue (Expenditures)	(5,986)	(5,840)	(5,988)	(6,196)	(6,282)	(6,386)
Expenditures (By Object)						
Wages & Benefits	2,830	2,814	2,775	2,791	2,839	2,900
Other O&M	4,225	4,280	4,436	4,569	4,629	4,701
Internal Recoveries	(728)	(881)	(865)	(823)	(842)	(867)
	6,328	6,213	6,346	6,537	6,626	6,734



GENERAL FUND - Public Works & Engineering

Directorate Budget						
	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Revenue						
User Charges	-	-	-	-	-	-
	-	-	-	-	-	-
Expenditures (By Activity)						
Legislation & Governance	108	110	104	98	100	102
Capital Planning	152	153	146	137	140	143
Project Management	163	164	156	147	150	153
Roads & Sidewalks	271	274	260	245	250	255
Water & Sewer	217	219	208	196	200	204
Public Transit	54	55	52	49	50	51
Drafting	119	121	114	108	110	112
	1,084	1,096	1,041	981	999	1,021
Net Revenue (Expenditures)	(1,084)	(1,096)	(1,041)	(981)	(999)	(1,021)
Expenditures (By Object)						
Wages & Benefits	1,026	1,043	954	973	991	1,012
Other O&M	58	53	86	7	8	9
	1,084	1,096	1,041	981	999	1,021

CITY GARAGE

2012 Highlights

The highlights of the City Garage operations include:

- Purchased fleet equipment such as two half-tons, fire pumper truck, two loaders, an ambulance, Zamboni, Vactor truck, excavator and a MED truck
- Continue to integrate WorkTech system to better track Public Works activities; trained staff in CityWorks, a GIS integrated work monitoring software
- Completed many occupational health and safety / fire Code updates at the City Garage, including repairs to the water service
- Implemented safe work practices for Public Works crews and updated the third edition of “City of Yellowknife Public Works & Engineering Safe Work Practices, Policies and Procedures”
- Wrote “Service Standards” for Public Works activities to standardize cost tracking and services
- Restructured Public Works services to include Solid Waste Facility under Operations and Maintenance
- Operations and Maintenance division continued review by an efficiency expert to improve work monitoring and reporting to industry standards
- Equipment maintenance was altered to meet original equipment manufacturing and staff shortage requirements; arrangement made with local contractor to take on overflow
- Increased maintenance standards on fire equipment to meet National Fire Code. Due to the workload this work is now contracted out.
- Built new parking garage, created a plan to decommission heat in Pine Point shop and use as cold storage
- Hired casual mechanics to help with maintenance tasks
- Updated two gensets at Liftstation #4 and Pumphouse #4
- Updated fuel monitoring program for City equipment to run more meaningful reports based on hours and kilometers used.

2013/2014/2015 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 and Mechanic's Shop, Public Works Operations and Maintenance offices and training room
- Provide regular repairs and preventative maintenance service by qualified mechanics for all City mobile equipment; investigate operating the Equipment Shop as a cost centre, under which all 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 Works divisions by:
 - stockpiling granular materials
 - having an inventory control area
 - using vehicle fuel fobs and employee ID cards to track fuel consumption by vehicle and department
- Track operational cost to better identify operational improvements.

2013/2014/2015 Objectives

The objectives of the City Garage are to:

- Provide preventative and service maintenance to all City vehicles on a timely and cost-effective basis: check and service all equipment and light vehicles by master schedule and capacity plan as a means of preventative maintenance. During such checks, mechanics shall 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
- Service diesel pumps and generators located at City facilities annually (including City Hall, Fire Hall, Multiplex, Ruth Inch Memorial Pool, Yellowknife Community Arena, pumphouses and liftstations, and City Garage) per CSA Standards



GENERAL FUND - Public Works & Engineering

- 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
- Maintain accurate records of all parts and labour expended to service City equipment and recover these costs from the receiving 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 found in an occupational health and safety audit of buildings surrounding Garage
- Continue to implement, where practical, the suggestions made by the consultant in the operational review.

GENERAL FUND - Public Works & Engineering

City Garage Budget				2013 Budget Recommended			
	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	(\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)	Note
Revenue							
Government Transfer							
Other Grants	-	-	-	-	-	-	
	-	-	-	-	-	-	
Expenditures (By Activity)							
Fleet Repair & Maintenance	1,402	1,263	1,268	1,235	1,262	1,298	
Maintenance Costs Allocated	(728)	(881)	(865)	(823)	(842)	(867)	(1)
Garage/Yard Maintenance	170	164	164	163	164	166	
Standby Generator Maintenance	32	29	29	29	29	30	
	876	575	597	604	613	626	
Net Revenue (Expenditures)	(876)	(575)	(597)	(604)	(613)	(626)	
Wages & Benefits	394	345	351	366	371	377	
Other O&M	1,210	1,112	1,111	1,061	1,084	1,116	
Maintenance Costs Allocated	(728)	(881)	(865)	(823)	(842)	(867)	(1)
	876	575	597	604	613	626	

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.



PUBLIC TRANSIT

2012 Highlights

The Public Transit highlights for 2012 include:

- Continued advertising on the exterior of regular transit buses
- Continued the Accessible Transit System through a dedicated bus
- Provided free bus service on Clean Air Day and Earth Day
- Provided bus service for the Air Show
- 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.
- Provided twice weekly Golf Club shuttle during July and August
- Negotiated new transit service contract, which includes pilot testing low-floor buses.

2013/2014/2015 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.

2013/2014/2015 Objectives

The objectives of Public Transit are to:

- Conduct monthly quality control meetings with the public transit contractor and school boards
- 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

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Revenue						
Government Transfer						
Other Grants	-	-	-	-	-	-
User Charges	328	373	358	341	345	348
	328	373	358	341	345	348
Expenditures (By Activity)						
Transit Operations	1,064	1,083	1,107	1,288	1,300	1,314
Net Revenue (Expenditures)	(735)	(710)	(749)	(947)	(956)	(967)
Expenditures (By Object)						
Wages & Benefits	-	-	-	-	-	-
Other O&M	1,064	1,083	1,107	1,288	1,300	1,314
	1,064	1,083	1,107	1,288	1,300	1,314



GENERAL FUND - Public Works & Engineering

Public Transit Performance Measures

	Projected 2011	Actual 2011	Projected 2012	Forecasted 2013	Forecasted 2014	Forecasted 2015	Notes
Workload Indicators							
No. of hours bus service provided	9,200	9,131	9,200	9,200	9,200	9,200	(1)
Annual ridership based on revenue	194,000	192,430	196,000	197,000	198,000	199,000	(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	6,000	6,843	6,800	6,800	6,800	6,800	
Efficiency Measures							
Annual subsidized cost per capita	\$36.93	\$36.97	\$37.45	\$47.03	\$47.20	\$47.46	(4)
Annual revenue/cost ratio	0.31	0.31	0.32	0.26	0.26	0.26	(5)
Annual subsidized cost per capita (accessible transit)	\$9.81	\$10.12	\$10.45	\$12.34	\$12.39	\$12.45	(6)
Annual revenue/cost ratio (accessible transit)	0.07	0.06	0.08	0.07	0.07	0.07	(7)
Effectiveness Measures							
% of users very satisfied or somewhat satisfied with the overall transit system	-	80%	84%	86%	86%	86%	(8)

Notes:

- (1) No changes to transit routes anticipated in next 3 years.
- (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 \$27.36 in 2009.
- (5) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was 0.38 in 2009.
- (6) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was \$9.67 in 2009.
- (7) The national average for Yellowknife's population group according to the Canadian Urban Transportation Association was 0.18 in 2009.
- (8) According to a Transit Survey in 2012, 84% were satisfied or somewhat satisfied with the overall transit service.

ROADS & SIDEWALKS

2012 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 windblown litter and debris buildup
 - Hand sweeping of City-owned sidewalks and medians
 - 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 80.3 km of paved and chip-sealed roads and 25 km of gravel roads
- Maintenance and repair of 18 sets of traffic lights
- Maintenance and repair of 2,462 traffic signs and 340 parking meters; fabrication and repair of 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 and park maintenance
- Installation of new signs and barriers
- Maintenance and repairs to City storm sewer system
- Pruning trees to remove obstructive and unsafe branches/limbs hanging over sidewalks and roads
- Resurface gravel roads when needed
- Painting curbs for No Parking zones on corners and by fire hydrants in the downtown area
- Clear brush from ditches to promote positive drainage
- Camera inspection of boat launch landing pads to detect wash-outs at the end of ramps
- Supply crew to perform pavement stamping at Somba K'e Park
- 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
- Assist and supply equipment and materials to Solid Waste Facility as needed
- Provide support to special events such as the Santa Claus Parade, Canada Day Parade, Aboriginal Day, Terry Fox Run, Run for the Cure, etc.
- Installation of Christmas silhouettes downtown
- Install and repair Christmas lights and banners on streetlights on Old Airport Road, Wiley Road and in Downtown Core
- Maintenance and repair of 28 bus shelters including cleaning and glass replacement, as well as the installation of new shelters and bus routes. Vandalism continues to be a problem.
- Clean 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
- Clean up or assist cleanup of any oil contaminants on city streets and properties
- Repair and maintenance of Giant Mine boat launch and access road
- Perform water sampling on all storm outfalls twice a year
- Continue to repair small potholes and asphalt surface breakage with cold mix
- Clean up area of Esso bulk station
- Paint older, faded bus shelters
- Provide line painting throughout the City for public safety
- Perform crack sealing on asphalt surfaces to prolong asphalt life expectancy
- Clean up and block off areas and sandpits to reduce dumping of refuse items in off-road areas
- Remove unknown dock that floated into Giant Boat launch area
- Widen turning lane on Old Airport Road and Borden Drive to promote traffic flow at Borden intersection



- Add turning lane at Stanton Plaza and Old Airport Road to reduce traffic congestion at Old Airport Road and Borden Drive
- Overlay areas on priority 1 and 2 roads to cover surface rutting and breakage to promote a safe driving surface
- In residential areas, remove heaving asphalt that draws complaints of vehicles bottoming out in front of driveways
- Fix area at Grace Lake to accommodate a canoe/kayak launch area
- Continue to install, remove and monitor trash separator at School Draw outfall
- Remove building and clean up area on Lessard Drive on waterfront property
- Backfill around new parking garage to promote drainage and reduce contracted costs
- Patch lower priority areas with cold mix to reduce contracted costs
- Haul used street sweepings to landfill and lagoon to use as road cover and cell cover material
- Update City service standards to accurately reflect staff hours, cost and duration of tasks at hand.

2013/2014/2015 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 and snow removal
- Provide street sweeping and dust control services to reduce airborne dust particles
- Maintain storm drain system
- Maintain signs, traffic lights, and bus shelters
- Provide a safe, team-oriented atmosphere for Roads & Sidewalks employees.

2013/2014/2015 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 and Sidewalks Budget

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Revenue						
User Charges	13	-	-	-	-	-
	13	-	-	-	-	-
Expenditures (By Activity)						
Snow & Ice Control	814	824	893	867	885	906
Street Maintenance	504	572	494	488	498	508
Street Sweeping	118	100	123	125	127	131
Storm/Ditch Maintenance	181	170	194	184	188	192
Traffic Signals/Lighting/Marking	1,087	1,164	1,279	1,390	1,396	1,401
	2,705	2,829	2,983	3,054	3,093	3,137
Labour & Equipment Allocation	(1,168)	(1,140)	(1,180)	(1,214)	(1,238)	(1,268)
	1,537	1,689	1,804	1,840	1,855	1,869
Net Revenue (Expenditures)	(1,524)	(1,689)	(1,804)	(1,840)	(1,855)	(1,869)
Expenditures (By Object)						
Wages & Benefits	1,411	1,426	1,470	1,452	1,478	1,510
Other O&M	1,893	2,033	2,132	2,213	2,236	2,262
	3,304	3,459	3,601	3,665	3,714	3,772



SNOW & ICE CONTROL

2013/2014/2015 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: snow plowing, road sanding, and snow removal.

2013/2014/2015 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
- Maintain paved roads through snow removal, plowing, and sanding
- Maintain gravel roads through grading, snow clearing and sanding
- Tender winter street sand annual requirements to achieve an acceptable balance between cost, preferred rock type, and public satisfaction with road sanding
- Maintain City facility roads and parking lots, including 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 of road salt mixture in treacherous conditions in spring and fall on major intersections to reduce ice build-up
- Provide 24-hour call-out service for snowstorms or slippery roads
- Clear City-owned sidewalks of snow and ice
- Remove snow and apply salt at City bus shelters
- Apply salt to sidewalks at alley entrances to reduce ice build-up in downtown core along Franklin Avenue.

GENERAL FUND - Public Works & Engineering

Snow and Ice Control Budget

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Snow Removal/Clearing						
Contracted Services	6	68	68	40	43	45
Materials	1	3	3	1	1	2
	7	71	71	41	44	47
Equipment	206	161	192	220	225	232
Labour	340	308	354	349	356	363
	553	539	616	610	624	642
Winter Sanding						
Contracted Services	-	-	-	-	-	-
Materials	195	190	210	189	191	193
	195	190	210	189	191	193
Equipment	18	30	17	19	20	20
Labour	48	65	50	49	50	51
	261	285	277	257	261	265
	814	824	893	867	885	906



GENERAL FUND - Public Works & Engineering

Snow & Ice Control Performance Measures

	Projected 2011	Actual 2011	Projected 2012	Forecasted 2013	Forecasted 2014	Forecasted 2015	Notes
Workload Indicators							
Annual snowfall (cm)	155	130	155	155	155	155	(1)
Efficiency Measures							
Cost per km of snow removed and cleared on roads and city streets	\$8,498	\$7,514	\$8,839	\$9,104	\$9,377	\$9,658	(2)

Notes:

(1) Annual Snowfall:

2008	199.0 cm
2009	174.1 cm
2010	124.8 cm
2011	130 cm

(2) Cost per kilometre includes ice control (winter sanding).

STREET MAINTENANCE

2013/2014/2015 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 reduce contracted costs
- Seal cracks in asphalt surfaces to 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.

2013/2014/2015 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 services for road maintenance/repairs throughout the year
- Maintain paved roads by patching potholes, 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 to avoid the expense of having a paving contractor carry out this task.



GENERAL FUND - Public Works & Engineering

Street Maintenance Budget

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Dust Control						
Contracted Services	-	-	-	-	-	-
Materials	1	33	33	30	31	31
	1	33	33	30	31	31
Equipment	7	11	7	8	8	8
Labour	21	57	22	21	22	22
	29	101	61	59	60	61
Gravel Road Maintenance						
Contracted Services	-	-	-	-	-	-
Materials	10	17	17	15	16	16
	10	17	17	15	16	16
Equipment	18	17	17	20	20	21
Labour	41	34	42	42	43	44
	69	68	76	76	78	80
Paved Road Maintenance						
Contracted Services	161	153	153	150	153	155
Materials	114	72	72	74	75	77
	275	225	225	224	228	232
Equipment	13	9	12	14	14	14
Labour	41	78	42	42	43	44
	328	312	279	279	284	290
Sidewalk Maintenance						
Contracted Services	45	46	46	42	43	44
Materials	7	10	6	5	6	6
	52	56	52	47	48	50
Equipment	5	7	5	5	6	6
Labour	20	28	21	21	21	22
	77	91	78	74	75	77
	504	572	494	488	498	508

GENERAL FUND - Public Works & Engineering

Street Maintenance Performance Measures

	Projected 2011	Actual 2011	Projected 2012	Forecasted 2013	Forecasted 2014	Forecasted 2015	Notes
Workload Indicators							
Kms of paved roads -- 4 lane	3.9	3.9	3.9	3.9	3.9	3.9	
Kms of paved roads -- 2 lane	63.7	63.7	65.6	66	67	67.5	
Kms of paved alleys -- 1 lane	7.6	7.6	7.6	7.6	7.6	7.6	
Kms of unpaved roads -- 2 lane	26	26	25.1	24.7	23.7	23.2	
Kms of unpaved alleys -- 1 lane	16	16	16	16	16	16	
Total	117.2	117.2	118.2	118.2	118.2	118.2	
Kms of roads reconstructed and new roads	1.9	1.9	0.717	0.773	1.170	0.7	(1)
Efficiency Measures							
Cost per km maintained -- road/alley	\$5,026	\$5,281	\$5,442	\$5,605	\$5,773	\$5,947	
Effectiveness Measures							
% of citizens very satisfied or somewhat satisfied with summer road maintenance	-	-	-	65%	-	67%	(2)

Notes:

- (1) 2011 Reconstruct Old Airport Road, Borden Drive to Cemetery Road (787 m)
 2011 Pave Drybones Drive (232 m), Ndilo (562 m), Moyle Drive Extension (330 m)
 2012 Ndilo (538 m), Enterprise Drive Extension (717 m) - gravel; 41A Street (210 m); 49th Avenue (104 m) - pave
 2012 Pave DeWeerd Drive (335 m); Driscoll Road (104 m); Moyle Drive (644 m)
 2013 Reconstruct Deh Cho Blvd (1.17 km); pave Raccine Road (148 m); Ingraham Drive (187 m); Doombos Lane (55 m); Morrison Drive reconstruct (773 m)
 2014 Cameron Drive (413 m); Taltheilei Drive (357 m); Etthen Drive (219 m)
 2014 Reconstruct 52nd Avenue, from 49th Street to 56th Street (613 m); Calder Crescent (348 m)
 2015 Pave Utsingi Drive (1.2 km)
 2015 Reconstruct 45th Street (172 m)
- (2) The 2010 survey showed 63% of citizens were satisfied.



STREET SWEEPING

2012 Highlights

The highlights of 2012 :

- Sweep downtown core on weekends and holidays to further reduce debris build up.

2013/2014/2015 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.

2013/2014/2015 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 their Air Quality Report (ENR).
- Continue to sweep throughout summer to minimize build-up of gravel and debris on city streets.

GENERAL FUND - Public Works & Engineering

Street Sweeping Budget

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Street Sweeping						
Contracted Services	-	-	-	-	-	-
Materials	-	3	3	2	2	2
	-	3	3	2	2	2
Equipment	32	30	30	34	35	36
Labour	86	67	90	89	90	92
	118	100	123	125	127	131

Street Sweeping Performance Measures

	Projected 2011	Actual 2011	Projected 2012	Forecasted 2013	Forecasted 2014	Forecasted 2015	Notes
Workload Indicators							
Total paved roads/alleys (kms)	75.2	75.2	77.3	77.5	78.4	78.4	
Efficiency Measures							
Cost per km to street sweep	\$1,423	\$1,989	\$2,048	\$2,110	\$2,173	\$2,238	(1)

Sweeping includes parking lots
Sweeping 7 days a week

Notes:

(1) Cost includes all costs of sweeping: labour, repairs, replacement costs. Cost to operate sweeper in 2011 was approx. \$200/hr.



STORM/DITCH MAINTENANCE

2012 Highlights

The highlights for Storm/Ditch Maintenance include:

- Cleared out debris and cut and sloped trenches to promote positive water flow on major outfalls
- Cleared debris from open ditches to promote positive water flow
- Marked all culvert ends to reduce culvert damage in spring when culvert end location is necessary
- Maintained and installed plates with fish symbols to raise public awareness that what goes into the city's ditches or storm sewers goes to our lakes and affects aquatic life.

2013/2014/2015 Goals

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

- Maintain a well-drained storm sewer system including ditches and storm sewers to promote positive drainage

2013/2014/2015 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

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Ditch Maintenance						
Contracted Services	7	11	11	5	6	6
Materials	3	3	3	3	3	3
	10	14	14	8	8	9
Equipment	7	10	7	8	8	8
Labour	26	27	27	27	27	28
	43	51	48	42	44	45
Storm Sewer Maintenance						
Contracted Services	4	5	5	1	1	1
Materials	18	21	22	20	21	21
	22	26	27	21	22	22
Equipment	14	13	13	15	15	16
Labour	102	79	106	105	107	109
	138	118	146	141	144	147
	181	170	194	184	188	192



TRAFFIC SIGNALS/LIGHTING/MARKING

2012 Highlights

The Traffic Signals/Lighting/Marking Division highlights include:

- Completed annual maintenance on traffic light cabinets and hardware.

2013/2014/2015 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 and software.

2013/2014/2015 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
- Using GPS technology, record location of street signs and track them when necessary.

GENERAL FUND - Public Works & Engineering

Traffic Signals/Lighting/Marking Budget

	2011 Actual (\$000's)	2012 Budget (\$000's)	2012 Forecast (\$000's)	2013 Budget Recommended (\$000's)	2014 Budget (\$000's)	2015 Budget (\$000's)
Line Painting						
Contracted Services	-	-	-	-	-	-
Materials	18	15	21	16	16	16
	18	15	21	16	16	16
Equipment	2	2	2	2	2	2
Labour	23	31	24	24	24	25
	43	48	47	42	43	43
Sign Maintenance						
Contracted Services	3	1	1	1	1	1
Materials	24	16	23	17	17	17
	27	17	24	18	18	18
Equipment	7	4	6	7	7	7
Labour	32	38	34	33	34	34
	65	59	64	58	59	60
Street Decorating						
Contracted Services	10	14	16	12	12	13
Materials	11	8	8	4	4	5
	20	22	24	16	16	17
Equipment	8	5	8	9	9	9
Labour	46	18	48	48	48	49
	75	45	80	72	74	76
Traffic & Street Lighting						
Contracted Services	7	23	23	20	20	21
Power - Street lights	866	947	1,030	1,165	1,166	1,166
Power - Traffic lights	26	30	30	29	29	29
	899	1,000	1,084	1,214	1,216	1,216
Equipment	1	2	1	1	1	1
Labour	4	10	5	5	5	5
	904	1,012	1,089	1,219	1,221	1,222
	1,087	1,164	1,279	1,390	1,396	1,401



GENERAL FUND - Public Works & Engineering

Traffic Signals/Lighting/Marking Performance Measures

	Projected 2011	Actual 2011	Projected 2012	Forecasted 2013	Forecasted 2014	Forecasted 2015	Notes
Workload Indicators							
Street Lights	1,540	1,547	1,559	1,578	1,597	1,616	(1)
Traffic Lights	18	18	18	18	18	18	(2)
Pedestrian Crosswalks	7	7	7	7	7	7	
Efficiency Measures							
Average yearly energy cost for street lighting	\$858,000	\$865,550	\$1,030,000	\$1,165,000	\$1,166,000	\$1,166,000	
Average yearly energy cost for traffic lights	\$25,000	\$26,431	\$30,000	\$29,000	\$29,000	\$29,000	(3)
% of citizens satisfied or very satisfied with residential street lighting	-	-	-	92%	-	93%	(4)

Notes:

- (1) Niven Lake Phase VII constructed summer 2011.
- (2) The traffic lights are in sets, therefore 18 sets of traffic lights totals 87 traffic lights.
- (3) LED light installation completed in 2008, intersections to be metered. Actual power cost was reduced from \$83,000 in 2008 to \$38,500 in 2009.
- (4) This question will be asked every two years. The 2006 survey showed 92% of citizens were satisfied.

COMMUNITY ENERGY PLAN

According to the 2004 Energy Profile, the community as a whole spends an estimated \$114 million on energy annually and boasts a per capita emissions level of almost twice the national average. 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.

2012 Highlights

The Community Energy Plan highlights include:

- A follow-up community energy profile was completed. The process builds on the 2004 energy baseline work and will be used to track the progress of the CEP. The process is the final step in the City's Partners for Climate Protection five- step process
- Facilities managers completed a number of energy efficiency projects including a lighting upgrade at the Multiplex and Yellowknife Community Arena
- A detailed mine resource assessment was initiated with the selection of VITO, a Belgium-based research team. VITO were involved in the development of the Herleen, Netherland's mine energy project. The work will bring the mine evaluation to an investment grade analysis to confirm the mine will be connected to the community energy system.

2013/2014/2015 Goals

The goals of the Community Energy Plan are to:

- Reduce City operations emissions by 20% by 2014 over 2004 levels by improving energy efficiency and adopting renewable energy for municipal operations
- Support the community in its effort to reduce emissions by 6% by 2014 over 2004 levels
- Reduce City operational energy use by 10% by 2014 over 2004 levels

- Actively support the development of alternative energy markets, including wood pellets
- Decrease the City's energy costs using local energy sources
- Examine waste biomass opportunities
- Examine the potential of biodigestion to produce energy
- Work with City facilities managers to continuously improve the energy performance and monitoring of their facilities
- Work with community groups to develop a Green Revolving Fund
- Complete the third installment of Yellowknife's Energy Inventory.

2013/2014/2015 Objectives

The objectives of the Community Energy Plan are to:

- Develop the business case to utilize waste biomass to be used in City facilities
- Upgrade to more energy-efficient lighting in the Curling Club
- Support the upgrade to more energy-efficient options during capital projects, such as increased insulation during the pool's roof replacement
- Establish an energy monitoring program for City facilities
- Develop energy monitoring capabilities.

