

CAPITAL FUND - 2015 Capital Projects

		2015 Budget Recommended (\$000s)	Formula Funding (\$000s)	IT Reserve (\$000s)
General Government	Page #			
Communication and Outreach Plan	205	40	40	
		40	40	-
Information Technology				
Network Upgrades	208	25		25
GIS Enhancements	209	50		50
Server Replacement	210	25		25
Satellite Imagery	212	85		85
Communication Infrastructure Renewal	312	25		25
Security Cameras	214	20		20
Secondary Site & Data Replication	215	10		10
Website Enhancements	216	15		15
Core Switch Upgrades	314	35		35
Virtualization	219	30		30
Multifunction Devices and Printers	234	50		50
Social Media	235	15		15
		385	-	385
Subtotal		425	40	385

CAPITAL FUND - 2015 Capital Projects

		2015 Budget Recommended (\$000s)	Formula Funding (\$000s)	Grants (\$000s)
Community Services	<u>Page #</u>			
Arenas				
YKCA - Ice Plant Bldg., Ice Boards & Ice Plant	321	930	850	80
Parks/Trails				
YK Rotary Park Trail Extension	250	30	30	
Doornbos Park	337	40	40	
Pool				
Painting of Pool Interior	338	100	100	
Subtotal		<u>1,100</u>	<u>1,020</u>	<u>80</u>



CAPITAL FUND - 2015 Capital Projects

DEPARTMENT	COMMUNITY SERVICES
DIVISION	FACILITIES
PROJECT	Doornbos Park Playground Equipment Replacement
Cost	\$40,000
STATUS	Replacement
PHASE	Replacement
DESCRIPTION	<p>Playgrounds have a life span of about 15 to 20 years and need to be replaced on an ongoing basis to serve the community.</p> <p>There have been multiple code changes and advances in play equipment over the past 20 years, and the new equipment is mostly hard plastic that endures well in our northern climate. It is now recommended by suppliers that all new playground equipment be erected utilizing plastics/powder coated aluminum technologies.</p> <p>In 2015, it is proposed that the playground equipment be replaced at Doornbos Park. The equipment is a combination of steel and wooden structures that has deteriorated over the years. The equipment is used frequently by many citizens in the area.</p> <p>The new playground equipment will stimulate children and encourage their mental and physical growth.</p> <p>This is an investment in the future of Yellowknife, and works toward Council's Goal #2¹.</p>

O&M IMPACT There will be no financial impact as this playground already exists and will require the same level of safety checks and maintenance regardless of the age of the equipment.

¹ Enhancing our Built Environment.

CAPITAL FUND - 2015 Capital Projects

DEPARTMENT COMMUNITY SERVICES
DIVISION PROGRAMS
PROJECT Ruth Inch Memorial Pool - Painting Interior
COST \$100,000
STATUS Replacement
PHASE 1 of 1

DESCRIPTION The Ruth Inch Memorial Pool opened its doors to the public in the fall of 1988. The pool continues to be a popular facility for the citizens and visitors of Yellowknife. In 2010, the City awarded an engineering firm to do a life cycle analysis of the Ruth Inch Memorial Pool which identified items that needed to be addressed to ensure the pool meets its life expectancy. The painting of the interior of the facility was addressed as one of the items that needed to be addressed within the next three to five years to ensure that the life expectancy of the building is met. The interior of the pool main deck area was painted in 1992.

The Community Services Department is recommending that the funding be identified for the painting of the entire upper level of the pool in September 2015.

This project works toward Council's Goal #2¹.

O&M IMPACT No immediate impact on O&M.

¹ Enhancing our Built Environment.



CAPITAL FUND - 2015 Capital Projects

		2015 Budget Recommended (\$000s)	Formula Funding (\$000s)
Public Safety	<u>Page #</u>		
Fire & Ambulance			
Gas Monitoring Equipment	340	15	15
Paving and Foundation Repairs	341	140	140
Fire Division Master Plan	342	110	110
Subtotal		<u>265</u>	<u>265</u>

		2015 Budget Recommended (\$000s)	Formula Funding (\$000s)
Planning & Development	<u>Page #</u>		
Harbour Plan & Smart Growth Development Plan Initiatives	265	500	500
Streetscaping Initiatives	266	500	500
Subtotal		<u>1,000</u>	<u>1,000</u>

CAPITAL FUND - 2015 Capital Projects

DEPARTMENT	PUBLIC SAFETY
DIVISION	FIRE AND AMBULANCE
PROJECT	Gas Monitoring Equipment
COST	\$15,000
STATUS	Replacement
PHASE	1 of 1
DESCRIPTION	<p>The gas monitoring equipment currently in use is being phased out by the supplier, Industrial Scientific, and it requires frequent maintenance due to its age. New gas monitoring equipment would enhance our service by providing more accurate data that we can then relay to the public.</p> <p>This project works toward City Council's Goal #4¹.</p>
O&M IMPACT	Minimal

¹ Continuous Improvement



CAPITAL FUND - 2015 Capital Projects

DEPARTMENT PUBLIC SAFETY
DIVISION FIRE AND AMBULANCE
PROJECT Paving and Foundation Repairs on Outer Edge of Fire Hall.
COST \$140,000
STATUS Replacement
PHASE 1 of 1
DESCRIPTION The pavement on the outer edge of the Fire Hall needs to be repaired because it is heaving, and starting to affect the foundation of the building.
This project works toward City Council's Goal #4¹.
O&M IMPACT Minimal

¹ Continuous Improvement

CAPITAL FUND - 2015 Capital Projects

DEPARTMENT PUBLIC SAFETY

DIVISION FIRE AND AMBULANCE

PROJECT Fire Division Master Plan

COST \$110,000

STATUS New

PHASE 1 of 1

DESCRIPTION The City of Yellowknife Fire Division is not fully confident that we are meeting all the industry standards or best practices with our delivery of emergency services. A Fire Division Master Plan would help identify the service gaps that are present today and others that may appear in years to come. This will help City Administration and Council to plan for future large capital and O&M expenditures.

This project works toward City Council's Goal #4¹.

O&M IMPACT None

¹ Continuous Improvement



CAPITAL FUND - 2015 Capital Projects

		2015 Budget Recommended (\$000s)	Formula Funding (\$000s)	M.E.R. Reserve (\$000s)	MACA Capital Grant (\$000s)
Public Works & Engineering	Page #				
Fleet Management	345				
1002-05 2005 Ford F250 W/ Service Box		63		63	
1095-11 2011 Crown Victoria B95		53		53	
1152-06 F350 w/Hiost and Dump Box		64		64	
1155-05 Ford F350		64		64	
1156-05 Ford F150		34		34	
1157-05 Ford F150		34		34	
1162-10 '72" Exmark Mower'		19		19	
2108-94 Ford Cyclone Aerial Superio		954		954	
T010-65 1665 45' High Boy Trailer		42		42	
T026-93 EZ Load Boat Trailer		11		11	
		<u>1,338</u>	-	<u>1,338</u>	-
Engineering & Garage	Page #				
Traffic Lights Video Detection Equipment	279	75	75		
Roads & Sidewalks					
Road Rehabilitation	218	3,000	790		2,210
Drainage Improvements	284	50	50		
		<u>3,125</u>	<u>915</u>	-	<u>2,210</u>

CAPITAL FUND - 2015 Capital Projects

		2015 Budget Recommended (\$000s)	Formula Funding (\$000s)	Water & Sewer User Fees (\$000s)	M.E.R. Reserve (\$000s)	Gas Tax Rebate (\$000s)	MACA Capital Grant (\$000s)
Solid Waste Management	Page #						
Landfill							
Baling Facility Mechanical Upgrades	286	25	25				
Site Restoration	287	150	150				
Centralized Composting Project	290	250	250				
		425	425	-	-	-	-
Community Energy Plan (CEP) Initiatives							
CEP Implementation	291	85	85			-	
Energy Efficiency Projects	291	415	415			-	
		500	500	-	-	-	-
Pumphouses/Liftstations (PHs/LSs)	Page #						
Liftstations Capital Upgrade	295	65		65			
Reservoir Flushing, Cleaning & Repairs	297	60		60			
Monitor & Controls Assessment & Upgrade	298	75		75			
Pumphouse & Liftstation Pipe Replacement	300	300	300				
Other							
Liftstation GenSet Installation (Backup Power)	301	175		175			
Fire Hydrant Repair/Upgrade	302	30		30			
CMP Replacement Program	304	4,525		6		4,519	
		5,230	300	411	-	4,519	-
PW Subtotal		10,618	2,140	411	1,338	4,519	2,210



CAPITAL FUND - 2015 Capital Projects

DEPARTMENT	PUBLIC WORKS & ENGINEERING
DIVISION	FLEET MANAGEMENT
PROJECT	Upgrading of Fleet
COST	\$1,337,720
STATUS	Replacement/ New
PHASE	Ongoing
DESCRIPTION	<p>The mobile equipment fleet has a replacement value of \$13.4 million and must be maintained to meet the service levels expected by residents. The City has a fleet of 134 active heavy-duty and mobile equipment that support Fire and Ambulance, Road Maintenance, Water and Sewer Maintenance, Solid Waste, Parks, Arenas and Administrative functions, plus 23 stationary engines for emergency power generation and fire pumping capacity.</p> <p>The replacement vehicles have passed their useful lives according to City practices. In addition, they are recommended for replacement according to a mechanical assessment carried out by licensed mechanics. In the 2006 Infrastructure Needs Assessment by Ferguson, Simek and Clark Architects and Engineers, it was noted that nearly half of the City's fleet has exceeded its anticipated life span. Currently the fleet has only a few vehicles that are older than the required age or do not meet the City's standard.</p> <p><u>Light Vehicles:</u> According to the City of Yellowknife Fleet Management Practices, these vehicles should be reviewed for replacement after five years and replaced after eight years. Replacing the aging fleet has lowered the O&M to operate the fleet. Starting next year, on an average, four pickups or vans have to be replaced every year to maintain the fleet to the policy standard. If the standard</p>

is not followed, more maintenance staff will have to be hired to maintain the fleet to a safe and operational level and there will be increased costs. Status: Good – meets standard. Note: Due to the success of the replacement program, the replacement age of light vehicles was increased from eight to ten years.

Medium-Duty Trucks:

According to the City of Yellowknife Fleet Management Practices, these vehicles should be reviewed for replacement after eight years and replaced after ten years. Status: Medium-duty trucks meet standard and no replacement medium trucks are planned this year.

Municipal Enforcement Vehicles:

These are to be replaced every three years or 100,000 km. Due to high usage, Municipal Enforcement vehicles require a high amount of maintenance (usage is nearly five times that of similar vehicles in the fleet). For this reason, it is important to maintain the replacement of the vehicles. One Municipal Enforcement vehicle must be replaced yearly to maintain the City standards and in order to reduce O&M costs and labour requirements. With the replacement of one vehicle this year, the City will meet the practice identified. Status: Good – standard is maintained.

Heavy Trucks:

This vehicle class includes trailers, tandem tractors, dump trucks, and street sweepers. One of the street sweepers is due for replacement. Most heavy trucks are to be replaced every 12 years. Sweeper and vacuum trucks are replaced every eight years. Because of the high amount of use and the large amount of wear on parts in that type of vehicle, reliability is greatly diminished as the equipment ages. After evaluation, the replacement age was changed to eight years from 12. Sweepers and vacuum trucks are required to meet environmental requirements set out by territorial and federal governments.

Trucks are used for City projects and snow removal in the winter. The cost of operating these vehicles compared to hiring contractors is about half. Each truck is operated for about 1,000 hours annually, saving the City \$45,000 per year for each truck it operates rather than contracting out. A highway tractor and roll-off bin truck were added to the fleet in 2012.

Trailers are reviewed when aged out. If practical, the trailer is refurbished and returned to service. The dump trailers (due to more use and normal wear and tear) are replaced when aged out.

As trucks get older, increased maintenance and repairs are required, such as replacing motors and transmissions at costs of \$20,000 and \$10,000 respectively. Breakdowns inevitably occur when equipment is needed, resulting in a cost to the City to engage contractors that is much higher than using our own resources. Status: if replacement continues, heavy-truck fleet is in good condition.

Heavy Equipment:

Most heavy equipment is to be replaced every 12 years. Heavy equipment is used for City projects and snow removal in the winter. The cost of operating our equipment compared to hiring contractors is about half. Each piece of heavy equipment is operated for about 1,000 hours annually, saving the City over \$45,000 per year for each piece of heavy equipment it operates.

Equipment in service at the Solid Waste Facility has a replacement cycle of six years. The equipment must run reliably or we may face environmental risks.

Graders are replaced every six years because the graders are required to maintain the roads in a safe manner. Breakdowns tend to leave areas that are not cleared in a timely manner, leading to complaints and possible dangerous road conditions.

As heavy equipment gets older, increased maintenance and repairs are required, such as replacing motors and transmissions at a cost of \$30,000 and \$20,000 respectively. Breakdowns inevitably occur when equipment is needed, resulting in a cost to engage contractors. The operators supplied by a contractor often cause damage to the streets because they are unaware of hidden hazards such as frost-heaved manholes and uneven curbs.

The City has explored contracting out heavy equipment services and leasing vehicles, but recommends the acquisition of replacement vehicles as the most cost-effective option. Status: if replacement continues, heavy-truck fleet is in good condition.

Mobile Tractors:

This class includes Zambonis, skid steers, compactors, and forklifts. The anticipated lifespan is ten years. This equipment is currently tasked with sidewalk and ice surface maintenance in the winter. Work in the summer includes sidewalk resurfacing and cold mix patches, trail repairs, and grounds maintenance. Status: if replacement continues, Mobile Tractor fleet is in good condition.

Emergency Vehicles:

This includes fire trucks, ambulances and water trucks. Due to increased demand and aged equipment, the replacement life cycle standard has been re-evaluated by Public Works and the Fire and Ambulance Division. The standard for replacement was reduced from 30 years to 20 years for most firefighting equipment. This was done after a replacement part was not available for a fire truck that was over 20 years old. The vehicle was out of service for eight weeks until a part was finally found at a used car wrecker. Parts are no longer manufactured for vehicles over 20 years old.



Ambulances are now replaced on a 12-year cycle, due to the high amount of use and reliability issues with ambulances as they get older. We have three ambulances and one is replaced every four years. The newest is placed on “first out the door” service and the oldest is declared surplus. Status: most of the emergency vehicles are due for replacement since re-evaluation of their life cycle. Condition is poor for most second line duty vehicles while front line vehicles are in good condition.

Other Equipment:

This class of equipment includes the miscellaneous equipment required by City departments to do their work. Included are: riding mowers, snowmobiles (Municipal Enforcement Division), all-terrain vehicles (firefighters), Solid Waste Facility baler, light trailers, line-painters, and crack sealing equipment, trailer-mounted water pumps, and ground thawing equipment. Equipment in this group have a varied life expectancy and replacement cost. Status: for the most part, this equipment group is in good shape and the replacement schedule allows for safe work and consistent work flow.

Stationary Engines:

Our fleet mechanics also maintain and service stationary engines. This includes standby generators for City water and sewer supply and City facilities (City Hall, Fire and Ambulance Division, Multiplex/Fieldhouse). The stationary engines provide standby electricity on water and sewer services in times of power outages or natural disasters. The estimated value of the stationary engines is approximately \$4.8 million. Many of the existing engines are old; three are over 30 years old, 12 are over 20 years old. Parts are often unavailable for engines over 20 years old. Although these engines get little use, even small breakdowns may result in lengthy repairs.

Status: The Mobile Reserve Fund is not used to replace stationary engines, although fleet resources are used to maintain them. It is recommended to departmental managers that the older stationary engines be replaced. Fleet-wide, it is recommended that one engine a year be replaced until all stationary engines are less than 20 years old.

Summer Vehicles:

Summer vehicles are those that have been replaced but are still useful in a secondary or low priority role. There are light vehicles used mainly by Community Services staff in the summer or as administration vehicles year round, and one heavy equipment class dump trailer used in winter as a backup or used with a leased tractor for winter snow removal, one vacuum truck and a sanding truck with a belly blade used for backup. If repair of a summer vehicle exceeds an estimated cost of \$500, the vehicle may be removed from service at the discretion of the Works Superintendent.

This project addresses City Council’s Objective #4.1¹.

O&M IMPACT

Maintenance costs will decrease if City of Yellowknife Fleet Management Practices are followed, due to reduced fuel consumption and repair costs. City residents will be highly satisfied with City services. If the fleet is replaced and a schedule followed, services will be more consistent and not interrupted due to equipment failure.

¹ Be accountable to residents by ensuring open and accessible information flow and accessible decision-making.

CAPITAL FUND - 2015 Capital Projects

Vehicle Unit #	New/Replacement	Year	Replacement Year/Standard	Replacement Value
1002-05 2005 FORD F250 W/ SERVICE BOX	Replacement	2005	2015	\$63,600
1095-11 2011 Crown Victoria B95	Replacement	2011	2015	\$53,000
1152-06 F350 w/hlost and dump box	Replacement	2006	2015	\$63,600
1155-05 FORD F350	Replacement	2005	2015	\$63,600
1156-05 FORD F150	Replacement	2005	2015	\$33,920
1157-05 FORD F150	Replacement	2005	2015	\$33,920
1162-10 '72" Exmark Mower'	Replacement	2010	2015	\$19,080
2108-94 94 FORD CYCLONE AERIAL SUPERIO	Replacement	1994	2004	\$954,000
T010-65 1665 45' HIGH BOY TRAILER	Replacement	1965	1977	\$42,400
T026-93 EZ Load Boat Trailer	Replacement	1993	2005	\$10,600
Total				\$1,337,720

