

## **Infrastructure and Environmental Services Department**

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### **About the Infrastructure and Environmental Services Department**

The Department is responsible for the planning, construction, operation and maintenance of all Town owned infrastructure assets related to buildings and facilities, transportation networks, water and sewer supplies, solid waste management, and fleet.

The Department supports internal clients by providing fleet management services for all Town owned equipment. This includes management, procurement, and maintenance of equipment such as vehicles, lawn care equipment and excavation equipment. The Department also manages the construction, operation and maintenance of all buildings and facilities owned or leased by the Town which are primarily in place to meet community cultural and recreational needs.

The Department provides its activities and support to clients through three organizational divisions: Linear Assets Operations, Facilities and Fleet Operations, and Engineering and Capital Projects.

### **Services That We Provide**

The Department has four major functions and various associated activities including:

#### Facilities and Fleet Services

- Facilities design, construction, repairs, and renovations
- Facility operations
- Fixed and mobile asset management, condition assessments maintenance, revitalization and replacement
- Fleet management and procurement
- Energy conservation and management

#### Linear Assets Operations

- Water and Wastewater Operations
  - Water meter installations
  - Water quality monitoring
  - Sanitary Inflow and Infiltration management
  - Stormwater system maintenance
  - Asset maintenance and operation
- Road Network Operations
  - Traffic management
  - Road asset management
  - Street lighting
  - Traffic lights
  - Sidewalk and curb management

## Infrastructure and Environmental Services Department

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- Bridges
- Solid Waste
  - Contract Administration
  - Customer complaints resolution
  - Diversion strategies

### Engineering and Capital Projects

- Development review for operational input
- Asset management strategy and implementation
- Capital planning
- Capital delivery
- Development inspections
- Lot Grading

### **Initiatives that advance the Strategic Plan in 2013**

#### **Community Goal: Supporting an exceptional quality of life for all**

- Update our Traffic and Transportation Master Plan in support of examining traffic patterns for improved movement and safety for our residents and commuters and options for sustainable alternatives to driving
- Review service levels and cost effectiveness of Town infrastructure to support future population growth while maintaining appropriate services levels for existing communities with the goal of no additions to staff for 3 years (pending approval of 2013 request)
- Launch Maximo asset management software and support post launch technical support and user training
- Role out of Safe Routes to School program as a joint initiative between the 9 municipalities, York Region, and the school boards and an Aurora led initiative intended to better coordinate school requirements with traffic management

#### **Economy Goal: Enabling a diverse, creative and resilient economy**

- Ensure that the essential public works services are available, safe and reliable, to support the diverse needs and expectations of the business community

#### **Natural Environment Goal: Supporting environmental stewardship and sustainability**

- Working towards Zero Waste for Town Hall and Senior Centre through the role out of a revised waste management and collection strategy
- Continue to create and promote waste diversion education programs in partnership with York Region through the development and implementation of the Integrated Waste Management Master Plan

## **Infrastructure and Environmental Services Department**

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- Proceeding with the Towns first LEED Gold building for the new Joint Operations Centre
- Support initiatives in the Corporate Environmental Action Plan including energy retrofits at Town Hall and the rainwater harvesting pilot project

### **Key Performance Measures**

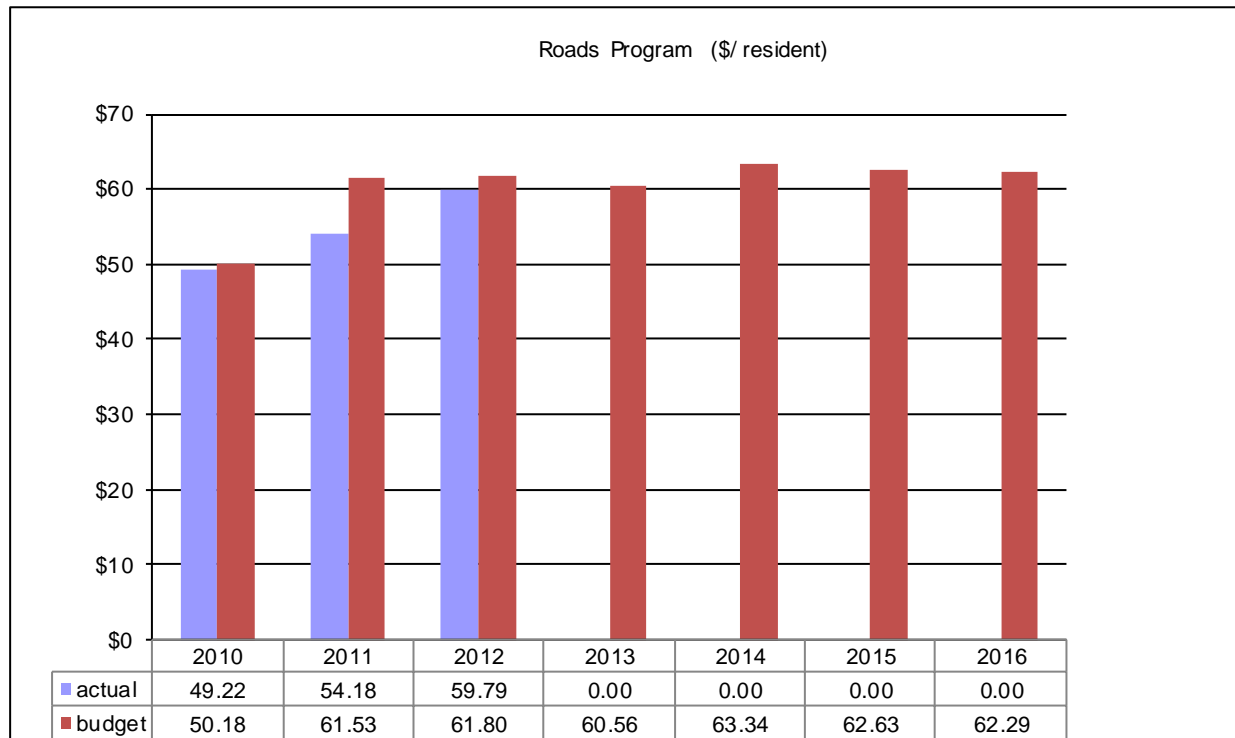
The department has selected the three key performance indicators of cost for roads, solid waste, and facilities and indicators of overall department performance and target setting. These measures have been selected based on their direct impact to the community and represent an indication of what it costs to deliver these services.

The costs are presented as dollars per resident based on population information provided through the Planning Department. This approach helps to normalize the costs so that the impacts of growth can be ignored and a better year over year comparison can be made.

### **Roads**

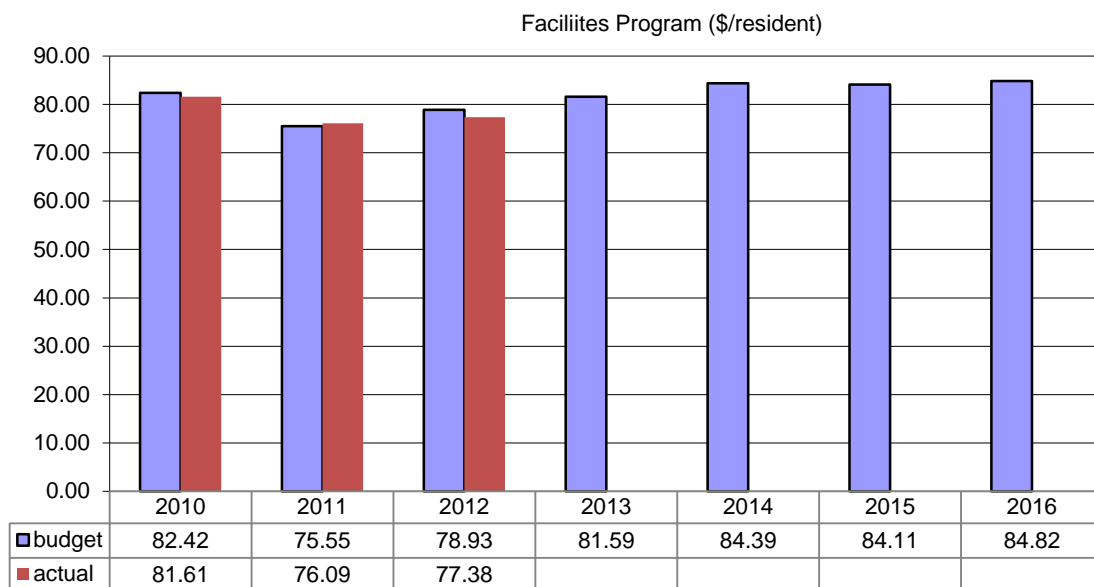
The graph includes winter and summer operations as well as traffic management and street lighting. There were a number of program adjustments made in 2011 that resulted in an overall budget increase of approximately \$700,000. The most significant impact was increases in summer and winter contract activities and transfers from the capital program to the operating program with a net total of \$495,000. As this budget is sensitive to seasonal conditions, actual costs can vary more dramatically compared to other service areas.

## Infrastructure and Environmental Services Department



### Facilities

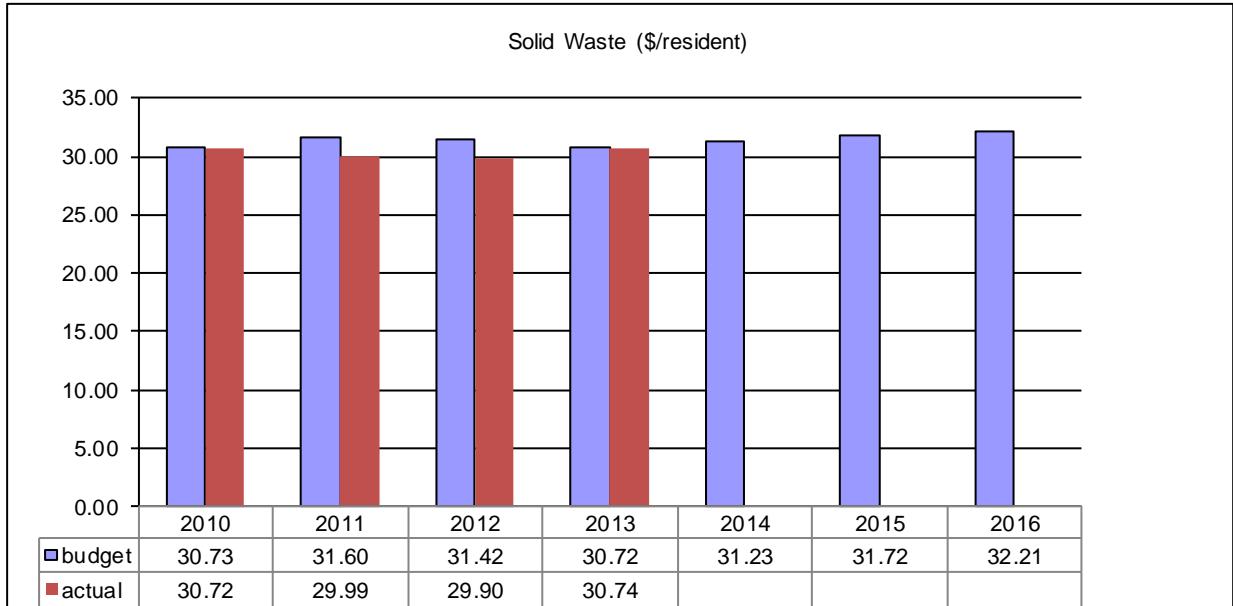
This program has been seeing a cost reduction per capita primarily based on the success of the energy reduction retrofits. However, cost pressures for energy, materials and supplies is expected to continue in the future with a marginal impact on operating costs as well as the introduction of the planned youth centre and new operations centre which factor into the 2014 budget.



### Solid Waste

## Infrastructure and Environmental Services Department

The Town is responsible for collection with all processing and disposal costs being the responsibility of York Region. With the approval of a Northern six 10 year service contract in 2007, the operating costs for the waste program are very stable with known collection quantities and annual contract increases. Future costs are expected to rise slightly due to annual increases and growth.



### Fleet

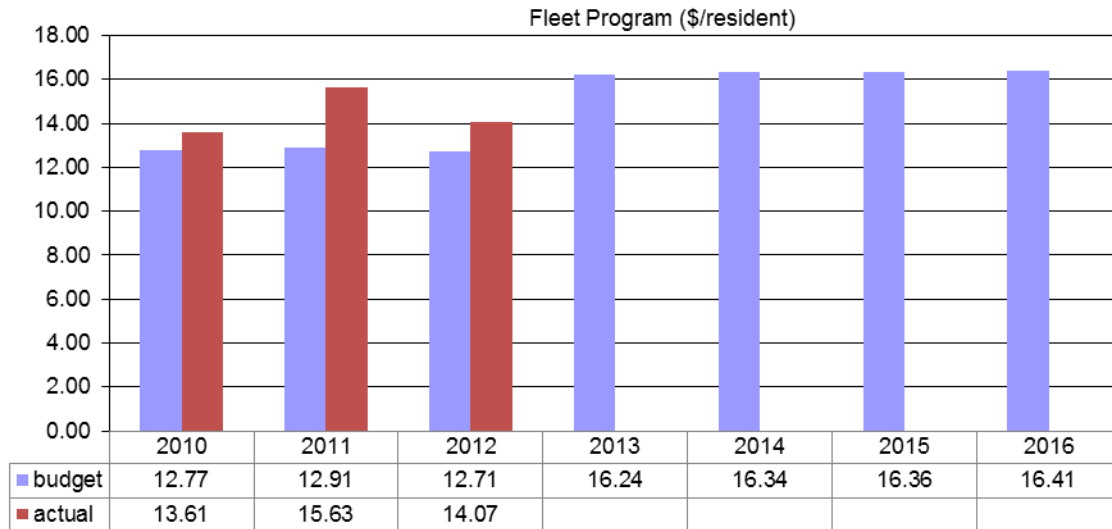
The fleet is an internal service with full cost recovery from the various user departments. The costs include mechanics staff, parts, and outsourced services for specialized or large repairs that cannot be effectively performed in house. In addition, fuel is purchased wholesale and used for the Town's fleet as well as fire services.

Fleet costs have been increasing in the past three years and have exceeded the budget in each of these years. The program costs were approximately \$130,000 over the 2012 budget due to increased costs in materials and supplies and contracted services required to maintain an appropriate level of vehicle condition. This is approximately 12 percent of the budget.

Two key drivers for 2013 are a combined increase of \$110,000 for materials and contracted services and \$107,000 for the requested fleet supervisor.

TOWN OF AURORA  
2013 BUSINESS PLAN AND BUDGET

**Infrastructure and Environmental Services Department**



**Full-Time Approved Complement:**

	Starting Approved	2013 Request
• Director & Admin Support	6 FT	-
• Linear Assets Operations	23.5 FT	-
• Facilities and Fleet Operations	25 FT	1 FT
• Engineering and Capital Projects	12 FT	-
	<u>66.5 FT</u>	<u>67.5 FT</u>

Current – Total Full-Time Equivalent Staff Positions =66.5

Proposed – 1 Fleet Supervisor Reporting to Manager of Facilities

**2013 Budget Overview:**

Overall department costs are forecast to be approximately 1 percent below budget for 2012. The 2013 budget is proposing a 2.4% increase over 2012 with cost pressures occurring in the following areas:

**Salaries**

For 2013, the request for a new Fleet Supervisor increases the operating budget by \$107,000, with the remaining cost increase of \$93,000 related to COLA. There is also a request for 3 seasonal part time position to augment the winter management program. The need for these positions will be assessed in early 2013 as part of the revised winter management service level review.

## Infrastructure and Environmental Services Department

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### Materials and Supplies

Material and supplies have an upward pressures of \$151,000 primarily related to for utilities and energy costs.

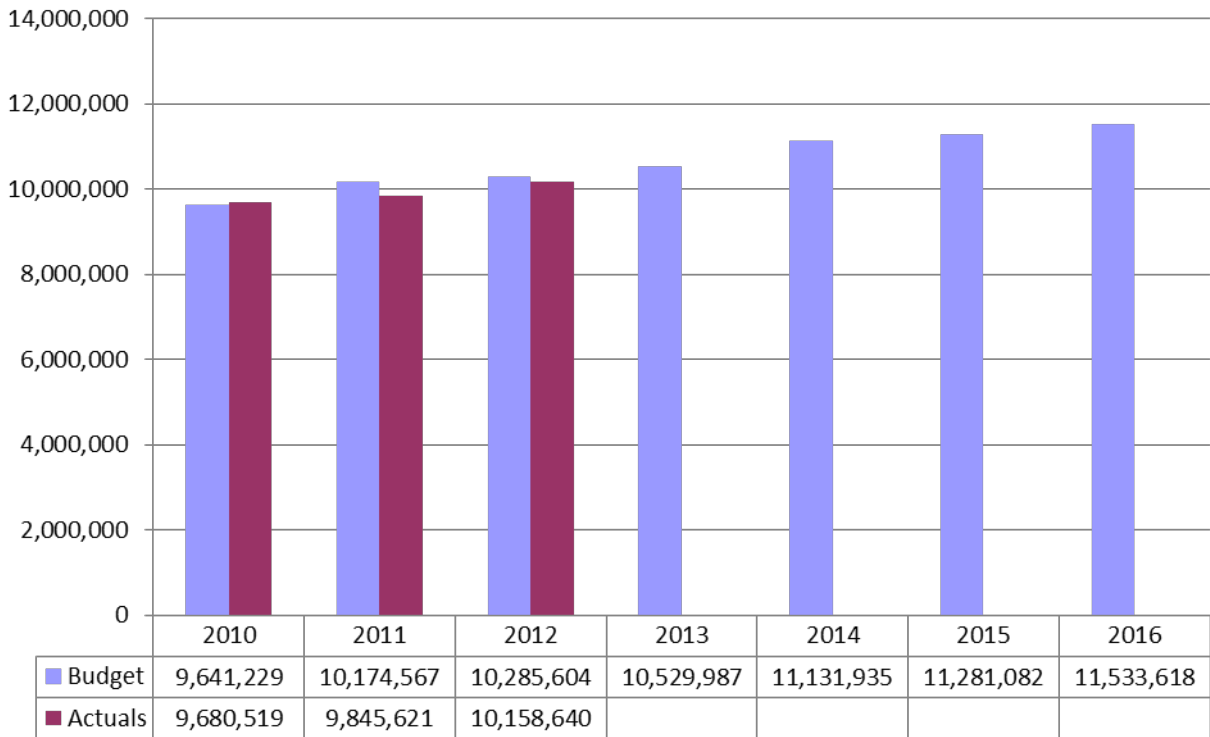
### Contracts

Contracts are seeing a slight increase of \$72,300. This impact has been mitigated through cost reductions in some areas of the program offsetting foreseen cost increases in other areas.

### Revenues and Internal Transfers

Revenue is projected to increase by \$93,000. Internal transfers are budgeted to increase by \$113,000 which is primarily due to the increased cost of fleet maintenance which is charged back to each user department.

## IES Net Operating Budget



## Infrastructure and Environmental Services Department

### Roads And Solid Waste Operations

**Division Overview:**

Linear Assets Operations for roads assets include pavement, sidewalk and street light management. The services include snow removal, street sweeping, patch and repair as well as sidewalk repairs and streetlight replacement programs.

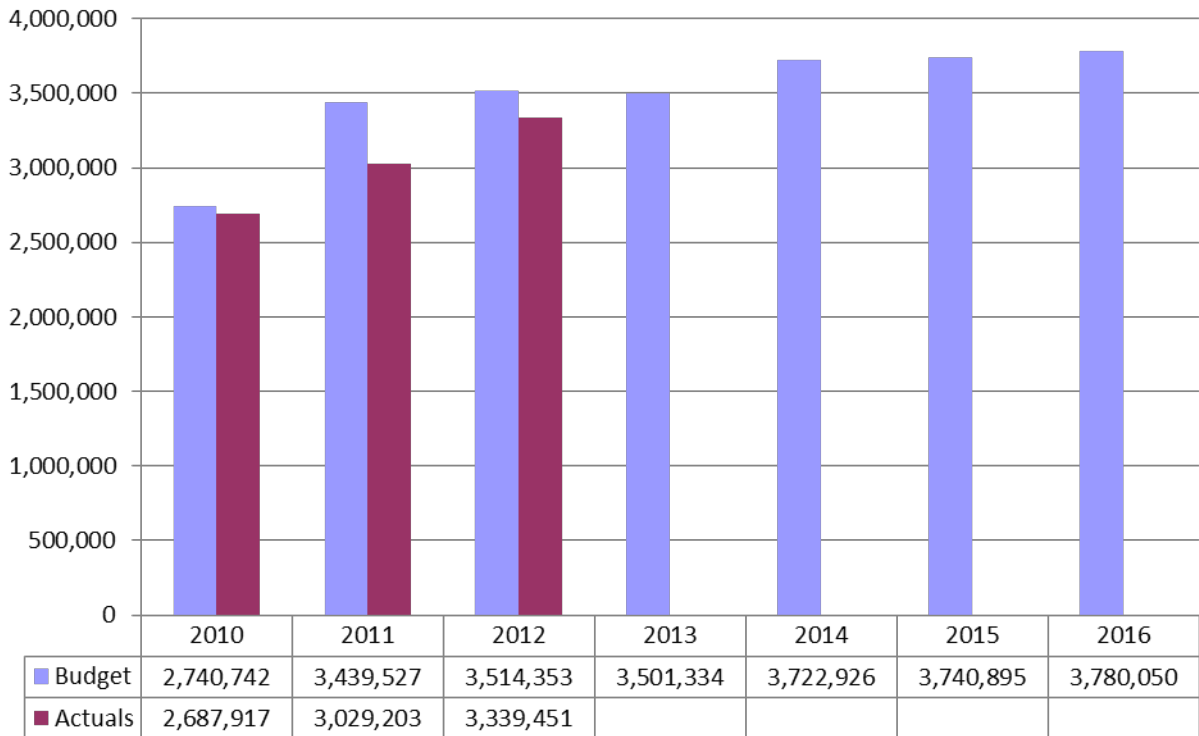
Solid waste management is also included in this function and is responsible for waste collection and drop off at the Regional Materials Recovery Facility in East Gwillimbury.

**Roads Budget Overview**

There are no proposed additions or enhancements to service levels in 2013 and there is a small cost decrease related to reduction in some contract areas and detailed review of program needs.

The significant cost pressures in 2014 are salary increase allowance of \$150,000 for COLA and provisions for 3 seasonal part time salaries, and approximately \$70,000 in additional material and contracted services.

### Roads Operating Budget



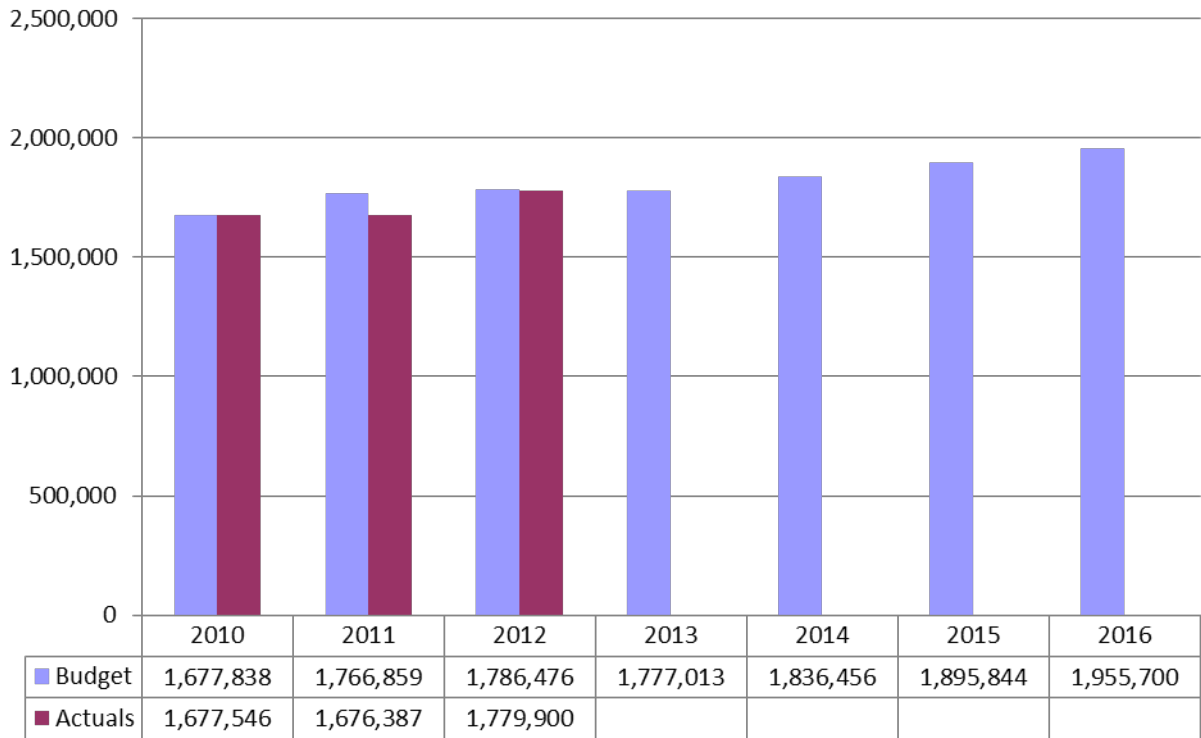


## Infrastructure and Environmental Services Department

### Solid Waste Budget Overview

Solid waste collection costs are relatively stable based on the current fixed term 10 year contract that expires in 2017. Cost pressures are related to community growth and annual contractual cost increases for tonnage collected. The program may be benefitting from two deflationary factors being light-weighting of the waste stream as a result of less glass and paper fibres and reduction of waste generated through public awareness and increased environmental ownership by our communities.

### Solid Waste Operating Budget



### Facilities and Fleet Services

Facilities and Fleet Operations provide design, construction, operational and maintenance services for all Town owned facilities and the fleet inventory. The assets include all non-parks related structures which provide accommodations for both Town staff operations as well as all community recreational and cultural activities.

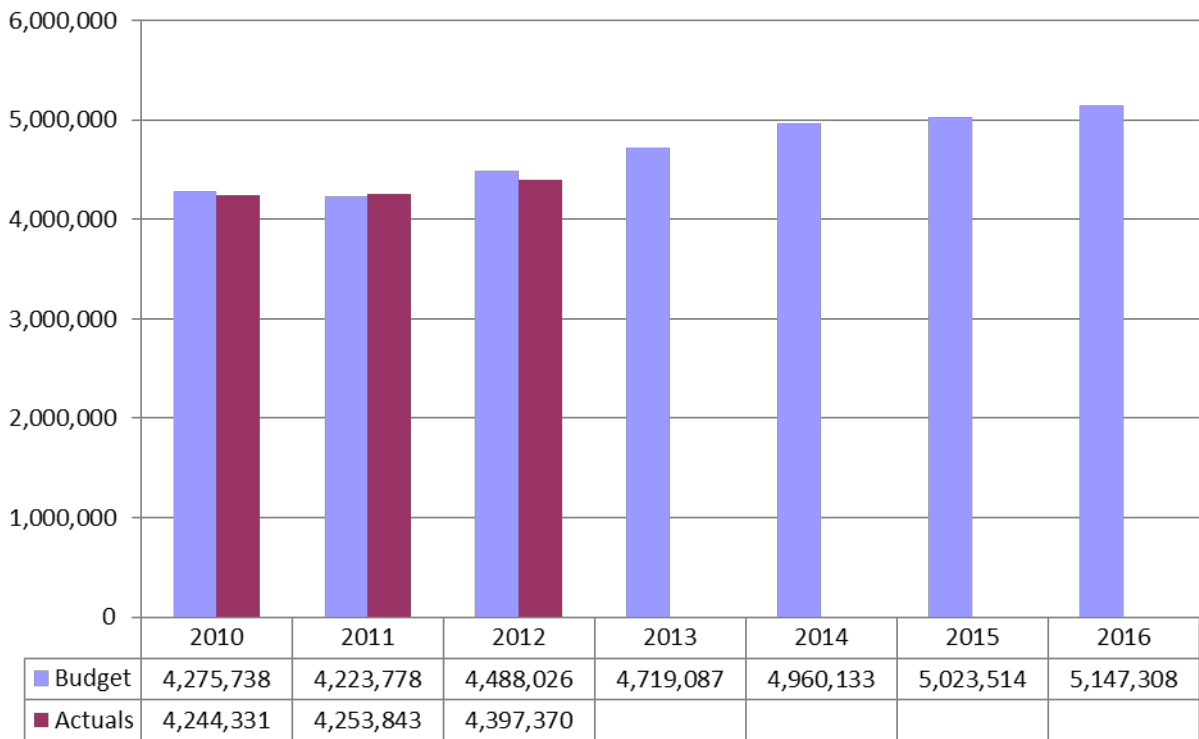
The Fleet program is operated by three mechanics and a Supervisor that manages both the Fleet and Town Facilities. Fleet is an internal service with full cost recovery from the user departments.

## Infrastructure and Environmental Services Department

### Facilities Budget Overview

Historic cost controls have benefited from energy management programs where energy costs are a significant part of the budget. However, as these project conclude, future cost pressures will continue resulting in a forecast upward pressure in this program. Further opportunities for energy reductions will be considered once the current retrofit program is concluded in 2013.

### Facilities Operating Budget



### Fleet Budget Overview

Fleet costs are fully recovered from the user departments resulting in a net zero budget impact. The follow figure presents gross operating costs to facilitate analysis of the budget trends.

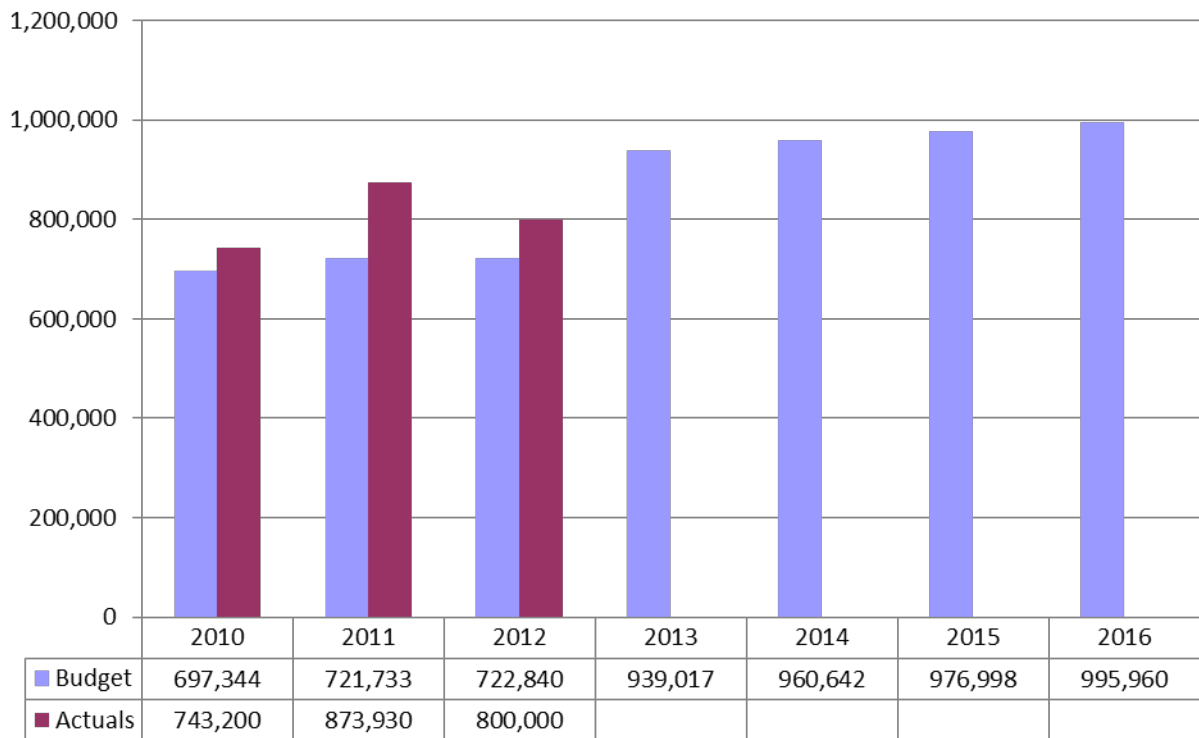
Historic costs have been consistently under budgeted and reflect the growing cost and volume of repair work that is needed to maintain the Town’s fleet. Unexpected repairs that have occurred in the recent past have been a result of major component failure or damage related to use. Staff will be undertaking a more detailed analysis to determine an optimal life cycle for major assets.

The cost pressures in 2013 relate to the addition of a Fleet Supervisor (\$107,000) and additional funding for parts and service costs (\$130,000). A review of fleet services in other comparable municipalities was completed and it

## Infrastructure and Environmental Services Department

was found that Aurora's asset volume and service area would justify a dedicated fleet supervisor. Adding a fleet supervisor would alleviate the current situation with the supervisor overseeing both facilities and fleet. Efficiencies in program delivery and long term financial planning and analysis is expected to result in longer term cost savings for the program. These savings are not reflected in the current forecast.

### Fleet Operating Budget



## Engineering and Capital Projects

### Division Overview:

Engineering and Capital Projects is responsible for technical support and services for the other divisions. Primary functions include asset management, capital program forecasting and budgeting, capital delivery, development review support and development construction inspections, and engineering.

### Engineering Budget Overview

The engineering budget is primarily salaries and has a tax supported component and a development growth funded component. Gross costs are presented for budget analyses.

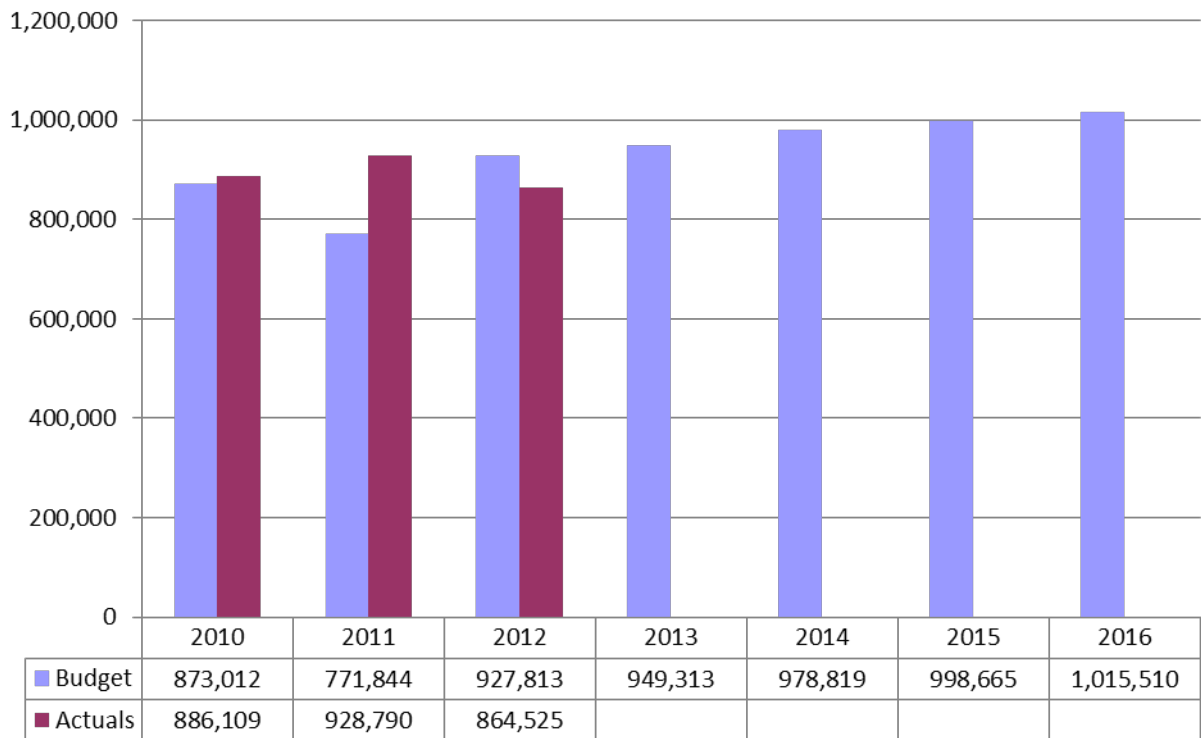
Engineering staffing is distributed both within the engineering groups as well as across other programs within the department. Adjustments in the 2011 salary

### Infrastructure and Environmental Services Department

splits resulted in a reduced contribution to this program, however, actual service demands were not effectively supported resulting in a reallocation back to the engineering staffing function.

Annual cost increased are primarily related to salary increased with no new position proposed in the forecast.

### Engineering Operating Budget



Department: Infrastructure and Environmental Services

Program: Fleet Services

How Does the Service Contribute to the Quality of Life in the Town of Aurora?

The desired results in the Town of Aurora Strategic Plan:

*Invest in Sustainable Infrastructure*

*Promoting and Advancing Green Initiatives*

**Who Do We Serve?** – Fleet services provide vehicles and equipment for internal programs including roads, parks, by-law services, and facilities. Assets range from full size loaders and trucks to grass equipment and motorized tools.

The types of uses the fleet assets are employed in include, bylaw enforcement and sign removal/collection, carpentry services, transportation of facility assets for event set ups, grass cutting and transportation of grass equipment to town parks, heavy construction equipment for parks and road related construction activities, light duty and medium duty vans and pucker up trucks for general transportation, inspections and field activities, snow plowing and salt application including heavy trucks and loading equipment, sign installation truck, vacuum truck for sewer flushing and excavations, street sweeper, mobile welding and power cleaning equipment, garbage truck for parks collections, specialized trucks for water testing and water related activities and ...

**What do we do?**- Services include, **Fleet Administration and Asset Management** (life cycles, cost analysis, condition, fleet rate calculations, capital and operating budgets) **Acquisitions and Disposal** (specifications, purchasing/supply contracts and reports, disposal/salvage/remarketing), **Fleet Analysis Fuel consumption** (Service and Inspection cycles/records, performance), **Maintenance** (mechanical service/repairs, body/paint, welding/fabricating, lubrication and wash facilities/licensing and inspections and, **Fuel Supply, Storage and Dispensing Equipment** (Tanks, pumps, and service)

**Why do we do it?**- Fleet services is best delivered as a centralized service to take advantage of the specialized skills and cost advantages related to fleet management. The alternatives of having each user department either outsource all services, or attempt to complete services internally department by department would not be cost effective and would not benefit from maintaining a strategic perspective corporate wide.

Department: Infrastructure and Environmental Services

Program: Fleet Services

Basic Facts			
Staff	Cost per Resident (2012)	Number of Assets	2012 Approved Gross Budget
Head Mechanic 2 Mechanics Part Time Supervisor	\$12.71 based on population of 56,862	250	\$722,840
Industry Comparator (City of London)			
51	\$25.95 based on population of 366,151	1400	\$9,500,000

Main Activities done to provide this service	How much did we do?	Is this service supported by other departments?
1. Fleet administration and asset management	250 pieces of equipment in fleet registry with a purchased value of \$6.0M Consisting of 56 road related vehicles, 37 off road (unlicensed) vehicles, (ice rinks etc), and 157 pieces of small equipment.	Asset tracking, and accounts payable supported by Finance. Risk management and claims supported by Legal and Clerks.
2. Fleet Acquisitions and Disposal	Average annual capital expenditure of \$645,000 expected over next 10 years. Typically 9 vehicles are replaced every year. Asset replacement is based on target lifecycle of 10 years or as condition dictates.	Tendering and asset disposal supported by Purchasing and legal.
3. Fleet Maintenance and Analysis	Maintain compliance with MTO vehicle inspection requirements	Some external support for specialized maintenance or heavy repairs that exceed in house shop capacity
4. Fuel Supply	Provide storage for 25,000 L of Diesel fuel and 9,000 L of Regular Fuel which is dispensed to internal fleet and Fire Services. 2012 budget of \$183,600.	Purchasing for cooperative fuel pricing negotiations.

Department: Infrastructure and Environmental Services

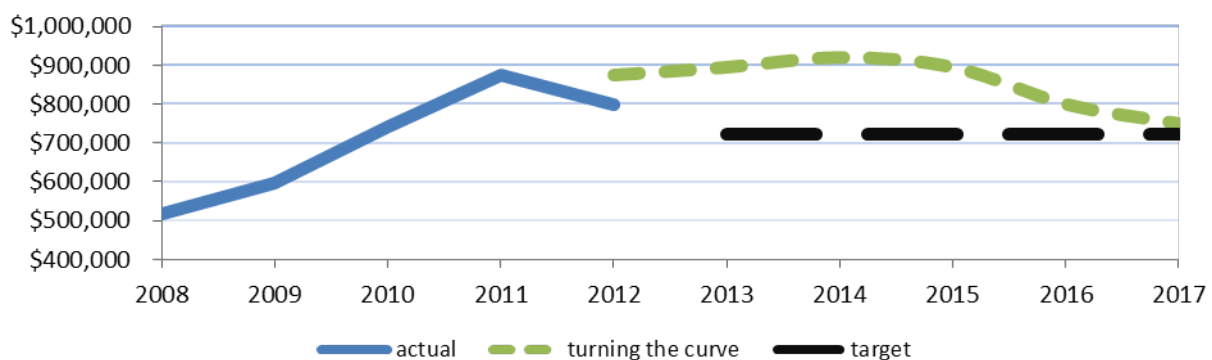
Program: Fleet Services

### Turning the Curve

Turning the curve is changing the direction of a trendline on an important measure of performance

Chart 1- Annual Maintenance Operating Budget including fuel (How well did we do)

Objective- To contain annual operating costs and improve strategic planning to recover full costs of proposed Fleet Supervisor position and achieve longer term cost savings.



### The Story Behind the Curve

This curve is an indicator of how well we are doing with regard to managing the cost of maintaining the fleet.

The trend since 2008 has been a steady and steep increase in operating and maintenance costs. Factors that appear to be contributing to this trend are increased maintenance costs to keep the current fleet operating effectively. The trade-off for reducing costs is increased down time due to equipment failures or poor performance.

The program focuses on asset up time so that equipment is available and reliable when needed. This may result in additional maintenance occurring during off season periods that may be sooner than needed to ensure that repairs or maintenance are not required during peak user department periods. Good examples of this are parks services in the summer and snow clearing in the winter.

Another factor may be increased maintenance costs as equipment ages. Analysis would be required to assess annual operating and maintenance costs to see impact of retaining older equipment vs earlier disposal with related lower average maintenance costs. This will be part of the future review to be completed by the proposed supervisor.

Department: Infrastructure and Environmental Services

Program: Fleet Services

### Strategies and Action Plans to Turn the Curve

The strategies proposed are to leverage support from our partners, identify low or no costs opportunities and optimize replacement life cycle for lowest cost

#### **Working with our Partners:**

1. Minimize vehicle wear
  - a. Promote minimum idling practice to reduce premature engine wear
  - b. Provide equipment usage information and training to minimize user error and inefficient equipment usage
  - c. Hold user departments financially accountable for damage related to poor practices
  - d. Cycle/rotate assets to balance age and mileage to maximize useful life
  
2. Rationalize vehicle needs
  - a. Track asset uptime and usage to keep as many assets in use as possible
  - b. Review GPS data to optimize service routes and duplication of trips
  - c. Look for opportunities to share vehicles to meet changing seasonal work loads

#### **Doing more with Less:**

1. Mechanics Training
  - a. Seek best practice learning opportunities to optimize maintenance with environmental and cost benefits and adjust schedules as needed
  - b. Review purchasing and service requests to buy appropriate quantities and maintain effective inventories
  - c. Review best cost benefit for in-house vs outsourced service needs
  - d.

#### **Planning for the Future:**

1. Hire Fleet Supervisor to provide more focused support to program
2. Review fleet greening strategy
3. Complete life cycle analysis
4. Fully utilize asset management tools for data collection and analysis



Department: Infrastructure and Environmental Services

Program: Fleet Services

2012 Accomplishments
<ul style="list-style-type: none"><li>• Delivered all approved asset replacements</li><li>• Maintained high level of equipment up time</li></ul>

Other Key Measures					
	2009	2010	2011	2012	2013
Total number of road vehicles					
Total number of off road vehicles					
Total number of all other assets					

To be reported in future period

Measures Under Development
<ul style="list-style-type: none"><li>• CVOR Commercial Vehicle Violation Rates</li><li>• Cost over Vehicle Life</li><li>• \$ operating cost per km light vehicles</li><li>• \$ operating cost per km medium vehicles</li><li>• \$ operating cost per km heavy vehicles</li></ul>