Appendix A

Transit Green Fleet Related Information on Greenhouse Gas Reduction Initiatives

Introduction:

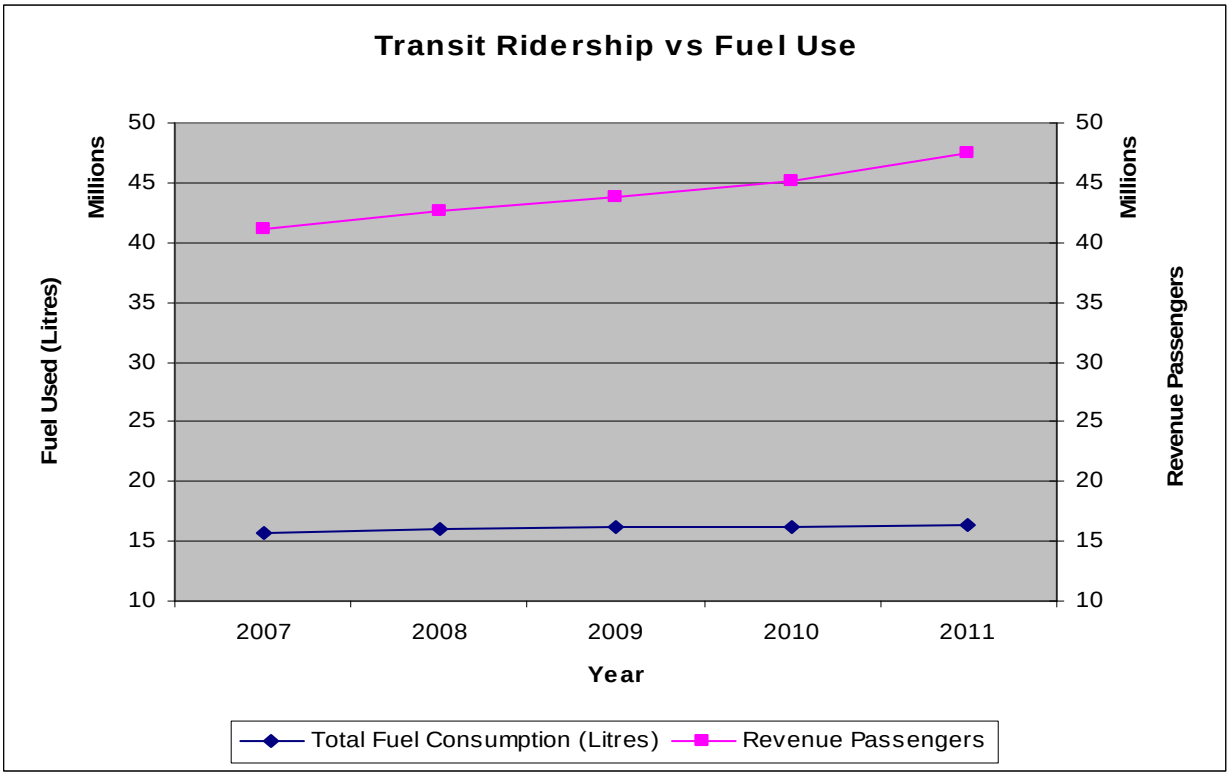
Greenhouse gas emissions associated with Transit fuel usage are not currently part of the City's Corporate Greenhouse Gas Inventory. This national standard inventory definition was adopted to allow direct comparison with municipalities across Canada. Transit consumes the largest amount of motor vehicle fuel purchased by the City; however, these operations result in a net reduction of greenhouse gas emissions by reducing the number of trips in private motor vehicles. Transit is implementing greenhouse gas reduction initiatives aimed at increasing ridership and further reducing overall greenhouse gas emissions in the City.

Transit Specific Greenhouse Gas Reduction Initiatives:

Transit's primary means of reducing greenhouse gases is to provide a service that encourages more people to replace individual trips in private motor vehicles with trips on buses. Transit has implemented a number of initiatives in recent years that have encouraged increased ridership. Examples of these initiatives include the following:

- Measures to improve speed and reliability of service such as the addition of diamond lanes during peak periods on heavily used roads, priority signals at key intersections and most recently, the completion of the South West Rapid Transit Corridor.
- Measures to improve passenger amenities and comfort such as the addition of large heated shelters at major stops and transfer points, adding air conditioning to buses purchased since 2007 and continuing the ongoing program to replace the oldest buses in the fleet with the newest, most comfortable and efficient clean diesel buses available.
- Measures to improve the ease of use of the Transit System through the addition of trip planning aids such as Navigo, BUStxt, BUSgadget, electronic bus departure displays at major bus stops and next stop announcements within buses.
- Measures to improve internal efficiencies to reduce fuel consumption such as the implementation of an anti idling program, incorporating Smart Driver fuel efficiency principles into the training program for all new bus operators and replacing full size passenger vans and SUV's with mid-size gasoline and hybrid SUV's.
- Measures to remain current with the latest developments in diesel and alternative fuel technologies such as testing electronic engine cooling fans in place of hydraulic fans to reduce parasitic loads on bus engines and increase fuel economy and participating in the evaluation of electric bus technology in conjunction with New Flyer Industries and The Province of Manitoba.

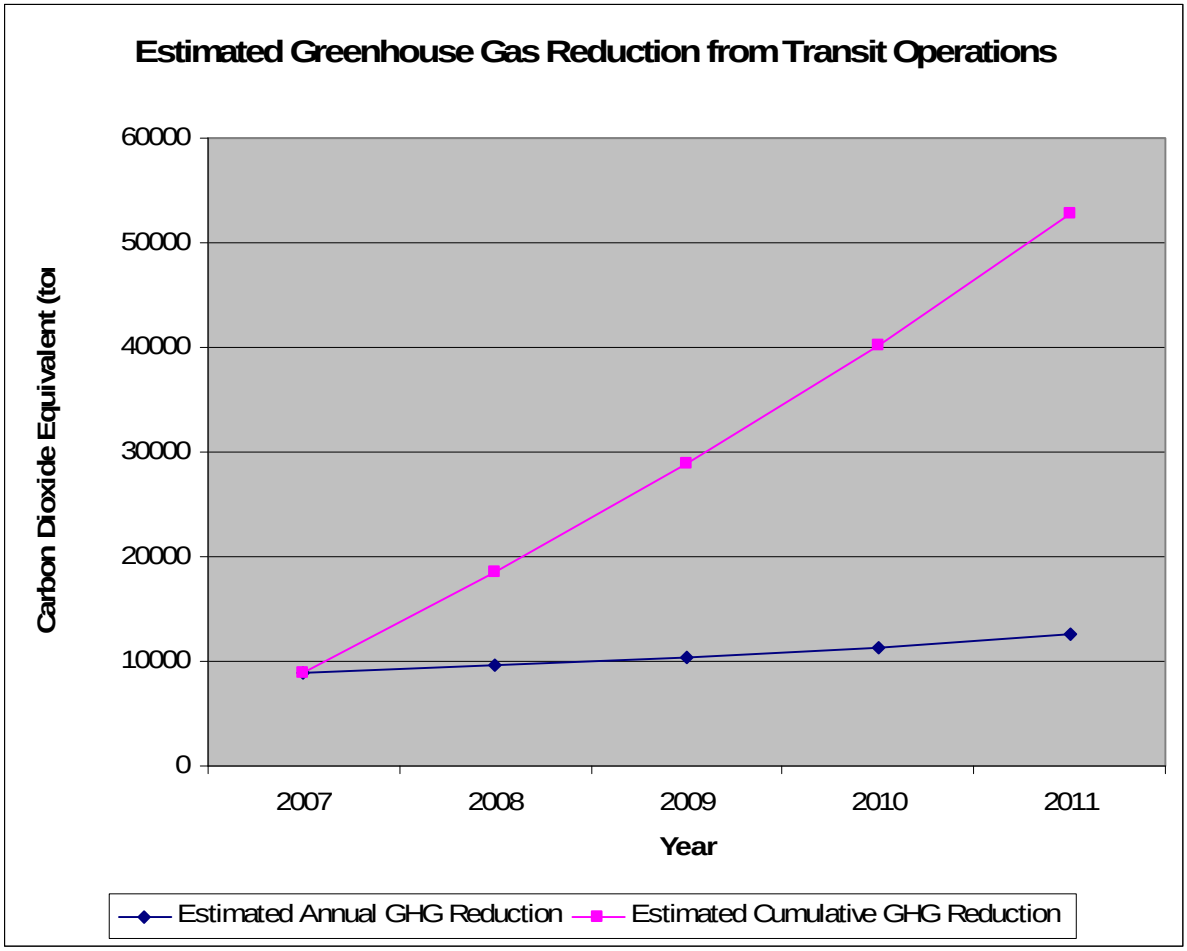
Transit ridership has grown steadily for several years and has exceeded the City's population growth rate. This trend is expected to continue. This increase in ridership has been accommodated within Transit's existing capacity to this point in time; however, pass-ups and overcrowding have become frequent occurrences. The following chart compares ridership growth with fuel consumption by Transit in the last five years.



Transit is addressing capacity issues by pursuing plans to expand its fleet and supporting infrastructure to meet current and future demands for service. The first measure is to expand the fleet by up to four buses per year between 2013 and 2015 and eight buses per year between 2016 and 2019. This would be accomplished by increasing the numbers of new buses purchased each year correspondingly. Another measure is the purchase of twenty used articulated buses for use during peak rush hour periods. Articulated buses provide increased capacity at a lower operating cost per passenger. These buses are expected to be available for service in late 2013 or early 2014.

Transit is currently the largest consumer of motor vehicle fuel among City departments and expanding service to meet passenger demand will increase the amount of fuel used. However, there is a substantial net reduction in the amount of greenhouse gases released in the community by replacing personal vehicle travel with travel by Transit. As a comparison, had Transit passengers used personal vehicles at average automobile occupancy rates over the last five years rather than Transit, over 50,000

tonnes of additional greenhouse gases would have been released within the City. The magnitude of the annual benefit is illustrated in the chart below.



The initiatives taken over the last several years and the ongoing plans to improve the speed, comfort, reliability and efficiency of the service are expected to accelerate the environmental benefits provided by Transit to the community.