

TORONTO STAFF REPORT

November 18, 2004

To: Board of Health
Policy and Finance Committee

From: Dr. David McKeown, Medical Officer of Health

Subject: Potential Impact of Car Free Day 2005

Purpose:

To report on the potential impacts of Car Free Day 2005 on air pollution, TTC ridership and public awareness of sustainable transportation.

Financial Implications and Impact Statement:

This report describes activities that could be undertaken for Car Free Day 2005 plus the associated costs. Toronto Public Health is proposing an additional 2005 operating budget request of \$102,863 (gross)/\$46,288.2 (net) and annualized at \$99,043 (gross)/\$44,569 (net), for the creation and implementation of a city-wide 2005 Car Free Day public awareness campaign. This request was not included in the Public Health 2005 Operating Budget Submission. This request is included in the report to the Board of Health regarding Additional Public Health Service Options.

The Chief Financial Officer and Treasurer has reviewed this report and concurs with the financial impact statement.

Recommendations:

It is recommended that:

- (1) the Board of Health endorse the initiatives proposed by the Car Free Day Working Group and the proposed Toronto Public Health budget enhancements to support this work;
- (2) this report be forwarded to the Works Committee for information; and
- (3) the appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

Background:

At its July 20, 21 and 22, 2004 meeting, City Council endorsed a voluntary Car Free Day for September 22, 2005. Toronto Public Health was designated as lead to establish a Working Group that includes the Works and Emergency Services Department, TTC, Toronto Cycling Committee, Toronto Pedestrian Committee, Special Events, the Roundtable on the Environment, and relevant stakeholders, such as the Sierra Club of Canada. Council directed that the event be built into each applicable department's annual work plan. The Working Group was directed to report to Council, in November 2004, through the Policy and Finance Committee, on the potential impacts of Car Free Day 2005 on air pollution, TTC ridership and public awareness of sustainable transportation.

At its meeting on October 6, 2004, the Works Committee requested the Acting Commissioner of Works and Emergency Services to report further on a variety of aspects related to Car Free Day, including car free zones and free transit for the day. The Acting Commissioner of Works and Emergency Services will report separately on these issues to the Works Committee.

This report responds to Council's request directed to the Medical Officer of Health. This report was prepared with the assistance of staff in Transportation Services, Works and Emergency Services, and in collaboration with the Car Free Day Working Group. The Working Group concurs with the overall directions of the report and its recommendations. Attachment 1 lists the agencies and groups represented on the Car Free Day Working Group.

Comments:

Health Risks Associated with Vehicle Use:

In Toronto, the transportation sector is a primary source of air pollutants, including nitrogen oxides (NO_x), sulphur oxides (SO_x), volatile organic compounds (VOCs), carbon monoxide (CO) and fine particulate matter (PM_{2.5} and PM₁₀). Some of these pollutants react with each other to form ozone, a key ingredient of smog. These air pollutants are known to cause or exacerbate cardiac and respiratory impacts including asthma attacks. One health study showed that when car use dropped significantly (such as occurred during the 1996 summer Olympic Games), air pollution levels and the number of childhood asthma events also dropped.

Toronto Public Health determined that air pollution in Toronto contributes to an estimated 1,700 premature deaths and 6,000 admissions to hospitals each year. These estimates are based on the health risk associated with acute exposures to nitrogen dioxide, ozone, carbon monoxide and sulphur dioxide, as well as chronic exposure to fine particles. These pollutants all arise from the combustion of fossil fuels, including those used for transportation.

The transportation sector (including cars, buses, and trucks) accounts for 65% of all nitrogen oxide emission sources generated within Toronto. While nitrogen dioxide levels show a slight but consistent decline across the province, the data suggests that levels have increased overall in Toronto over the previous decade. Compared with other Ontario communities with air

monitoring stations, Toronto had the highest summertime levels of fine particles and highest annual mean levels of nitrogen dioxide, based on data for 2002 which is the most recent year that data were available from the Ontario Ministry of the Environment.

The steady increase in nitrogen dioxide levels in Toronto over the last two decades mirrors the steady increase in vehicle use in the city. Between 1980 and 2000, there was an estimated 72% increase in vehicle kilometers travelled by cars and light duty-trucks in the Metropolitan Toronto Area. The use of private motor vehicles is growing faster than the use of public transit.

Motor vehicles are also a significant source of greenhouse gases that contribute to global climate change. At the national level, the transportation sector is estimated to be responsible for about one quarter of greenhouse gases emitted in Canada. Almost half of this comes from cars and small trucks.

While it is clear that vehicle use contributes to air pollution and associated health impacts on Toronto residents, vehicles also affect health in other ways. Vehicle accidents are responsible for a significant number of injuries and deaths in Toronto. Based on data for the past 5 years, an average of 24,000 people are injured and 77 people are killed each year in collisions involving cars, trucks and other motorized vehicles in Toronto. This means that every 22 minutes someone in Toronto is injured from a collision involving a motorized vehicle. More than half of those killed are pedestrians.

Prolonged car use on a daily basis can also affect health in indirect ways. For example, recent studies suggest that people who live in more compact communities that encourage alternate modes of transportation, such as walking and bicycling, are more likely to have healthy weights than those who live in communities which rely more heavily on car use. People who do not engage in regular physical activity are at increased risk of cardiovascular disease, diabetes, obesity, osteoporosis and mental health problems.

The Purpose of Car Free Day:

The objectives of International Car Free Day are to promote alternative modes of transportation, to provide an opportunity to experience streets in a different way, and to act as a catalyst for long-term change in transportation patterns. Car Free Day events and promotions are intended to encourage people to experience more walking, bicycling, car pooling and public transit, even if only for one day, with the long-term goal of continuing these healthier ways of getting around. Well-planned Car Free Day activities can positively impact on the transportation choices that people make every day in the longer term.

The objectives of Car Free Day support many of the City's current policies and programs. Toronto promotes sustainable transportation policies in the Official Plan which advocates for a transportation system that reduces automobile dependency and moves people and goods efficiently. In addition, the Environmental Plan advocates for convenient, sustainable efficient transportation options that reduce environmental, social and health impacts.

Numerous City programs promote more sustainable and active transportation. These programs include: the Smart Commute employee trip reduction program; 20/20 The Way to Clean Air social marketing campaign; Toronto Bike Week; and Pollution Probe's Clean Air Commute that the City helps promote.

In addition, the City has ongoing programs to make infrastructure improvements to support increased walking, car-pooling, cycling, and public transit. Examples include: (1) dedicated streetcar right-of-ways, such as on St. Clair Avenue; (2) new sidewalks on both sides of all arterial and collector roads; and (3) the Toronto Bike Plan, which include plans for a 1,000 km bikeway network; (4) transit priority traffic signals; and (5) high occupancy vehicle lanes.

Car Free Day would provide an opportunity to promote the City's sustainable transportation programs and to raise awareness of the need for change in personal transportation choices.

International Car Free Day:

The first Car Free Day activities began in Europe in 1999 as one-day public awareness events. These events have been so popular that since 2002, they have been expanded to European Mobility Week with a focus on more environmentally sustainable ways to move about in the city on a long-term basis. Car Free Day, which takes place on September 22, is the signature event within Mobility Week. In 2003, 723 cities from 21 countries took part in European Mobility Week.

Although Car Free Day originated in Europe, with active participation by major cities such as Paris and London, it has since become a widely recognized international event. Over 1,500 cities around the world, including Canadian cities such as Halifax, Montreal and Ottawa, participate in Car Free Day events and activities. These range from promotions encouraging residents to voluntarily leave their cars at home for a day to street festivals involving street closures.

While the primary purpose of Car Free Day is to shift public attitudes and behaviours with respect to car use, events that have involved street closures provide evidence of significant reductions in air pollution levels during the event. For example, Sunday street closures in Toronto's Kensington Market area through the Kensington Pedestrian Sundays program resulted in carbon monoxide levels dropping by approximately 50% in that area. During Montreal's six-hour closure of a major road (Ste. Catherine) as part of its 2003 Car Free Day event, there was a 40% reduction in nitric oxide and carbon monoxide compared to the typical Monday levels.

The evaluation of Montreal's Car Free Day 2003 demonstrated that it had a positive impact overall. For example, subway ridership increased by 10%, about 15,000 people were present on the closed street, and more than 90% of residents surveyed reported awareness and increased knowledge about Car Free Day.

Toronto's Car Free Day activities began in 2001 as a public forum and street celebration on St. George Street, and expanded in 2003 to include free bike clinics, festivals and 27 small-scale neighbourhood street closures. The Sierra Club Ontario Chapter and local neighbourhood groups organized these activities, with the cooperation of staff from Works and Emergency

Services and Urban Development Services, and funding provided by the Toronto Atmospheric Fund and others. While city staff have provided considerable support and technical advice for past Car Free Day activities, no funds have been provided to date for Car Free Day promotion or activities.

Toronto Car Free Day Events in 2004:

The Toronto 2004 New Mobility Summit, a five-day event during the week of September 20, 2004, was organized by the Sierra Club and other key agencies such as the GTA Clean Air Partnership, in collaboration with staff from Works and Emergency Services, Urban Development Services and Toronto Public Health. The Summit brought together individuals, organizations and governments concerned about transportation, health and the environment to discuss sustainable transportation options and to prepare for expanded “Car Free Day” events in 2005. The scale of activities undertaken in Toronto was modest compared to those of other cities, such as Montreal, given a lack of dedicated resources.

Toronto’s 2004 New Mobility Summit provided a good venue to begin discussions about the 2005 Car Free Day events. The public and City staff from a variety of program areas such as transportation services, environmental health, physical activity, cycling and pedestrian promotion and the TTC, participated in events held throughout the week. Events included workshops to discuss 2005 Car Free Day activities out of which some key ideas emerged.

Car Free Day was seen by the workshop participants as having value as a single day event to celebrate the City's sustainable transportation programs and accomplishments during the year. It was felt that Car Free Day should build partnerships and link activities among the non-governmental organizations (NGOs), business community and government agencies to ensure a co-ordinated effort, thereby getting greater public and media awareness in 2005.

While Car Free Day was seen as having value as a one-day public awareness activity, the workshop participants felt that Car Free Day actions need to be considered every day. Hence, a signature street closure event that demonstrates future possibilities for sustainable transportation infrastructure would have more impact. They suggested that the City should take what is working and do more each year, such as increasing the number of bicycle lanes and paths, increasing the number of high occupancy/transit lanes or increasing the number of people car-pooling. The long-term goal of car-free/sustainable transportation activities is the more efficient use of the road infrastructure, given that the amount of road space in Toronto cannot grow to meet the increasing demand by single-occupancy motor vehicles.

Planning For Car Free Day 2005:

The Car Free Day Working Group recommends two new strategic directions for Toronto’s Car Free Day 2005, in addition to facilitating community-initiated events as in previous years. These include promotion of voluntary actions that encourage sustainable transportation activities; and a city-sponsored high-profile signature event to create media and public awareness. The Working Group felt that Car Free Day would have the greatest positive impact if both new strategic directions are implemented together because they support and amplify each other.

Toronto Public Health's Role in Voluntary Car Free/Clean Air Promotions:

Cities involved in Car Free Day activities include, as a minimum, awareness campaigns that encourage the public to celebrate Car Free Day and to voluntarily leave their car at home for the day.

The broader 'New Mobility' framework adopted by cities participating in Car Free Day activities encourages residents to think about, experience for a day, and make a longer term commitment to more sustainable ways of moving about in the City. A Car Free Day public awareness program would encourage voluntary action in decreasing car use on Car Free Day and advocate for year-round action.

Toronto Public Health is proposing an additional 2005 budget request of \$102,863 (gross)/\$46,288.2 (net) for the creation and implementation of a city-wide Car Free Day public awareness campaign. The budget is intended to fund a short-term co-ordinator in Toronto Public Health to liaise with community and business partners to encourage participation, to provide in-kind support and to facilitate funding from external sources. In addition, the funds would be used to develop a campaign brand and visuals for use in the City's advertising and educational resources.

The campaign would encourage the public to celebrate Car Free Day and ask them to make a longer term commitment to more sustainable ways of moving about in the City. It would highlight existing city and community clean air programs with the objective of developing new partnerships with the private sector and community for future Car Free Day programs. The public awareness program would integrate other City of Toronto promotional programs such as injury prevention, smog reduction and physical activity promotion.

Works and Emergency Services' Role in Street Events:

Several transportation-related concepts have emerged from discussions with the Car Free Day Working Group including local community-initiated events and a signature street event. These will be coordinated by Works and Emergency Services.

(1) Local Community-Initiated Events

Street festivals have occurred in Toronto since 2001 organized by the Sierra Club and local neighbourhoods, with support from City staff. The Sierra Club had limited funds to support three local street closures this year. Neighbourhoods and Business Improvement Areas could be encouraged to plan street celebrations and large employers could also be approached to organize their own workplace events. Works and Emergency Services would provide some support for participating communities and organizations, including assistance with permits, barricades, signage and promotion.

(2) Signature Street Event

A signature event would support the City's long-term transportation goals and provide Torontonians with an opportunity to experience streets in a new way. Concepts for a signature street event include:

(a) Full Enforcement of Existing Lane Restrictions

Use a full or partial road closure to enhance surface transit on Car Free Day. For example, general traffic is currently prohibited on the streetcar tracks on King Street, from Dufferin Street to John Street and from Jarvis Street to Parliament Street, during the morning and afternoon peak periods. However, low compliance by drivers results in significant delays to streetcars during their busiest times. Stepped up enforcement of the existing regulations and extending them for the whole day would provide enhanced transit service on King Street. This would be achieved by physically delineating the streetcar tracks to block access to cars and trucks and providing an increased police enforcement presence along the route. The curb lanes could remain open for general use by drivers and cyclists; however stopping and parking would have to be prohibited. This concept could be applied to other streetcar or bus routes as well.

(b) Full Street Closure

Implement a full street closure so that the street is open only to transit vehicles, and bicycles, with pedestrians on the sidewalk. This concept might work best on streetcar routes because streetcars occupy the centre lanes and the curb lanes would be open for cyclists. For example, Queen Street could be converted for the day between Jarvis Street and Spadina Avenue, with a public celebration in Nathan Phillips Square.

(c) Promote More Bicycle Transportation

Provide a temporary bicycle lane by closing the curb lanes to motor vehicles for the day. This might best be applied by connecting existing bicycle lanes to provide more continuous protected routes for cyclists to encourage more people to cycle to work on Car Free Day. For example, the bicycle lanes on Bloor Street East could be extended westward from Sherbourne Street, where they currently end, to Christie Street or a point further west. Alternative east-west and north-south routes could also be considered.

All of the concepts described above need to be investigated in more detail. The Acting Commissioner of Works and Emergency Services will report on these and the associated costs in an upcoming report to the Works Committee.

Process for Planning Car Free Day 2005:

The Car Free Day Working Group supports the strategic directions noted and recommends that it continue to plan and support implementation of 2005 Car Free Day activities. The development of an implementation plan will be based on Council's direction and associated funding commitments. It should be noted that the initiatives noted above could all be implemented,

subject to funding. They all have value in increasing awareness of Car Free Day and healthy alternatives to the single occupancy vehicle. The activities proposed by Toronto Public Health and Works and Emergency Services complement each other but can only be implemented with adequate budget support.

The 2005 Car Free Day activities that are undertaken will be evaluated to determine improvements to local air quality, impact on transit use and public awareness of sustainable transportation options.

Conclusions:

The goal of Car Free Day is to shift public attitudes and behaviours with respect to car use and to encourage sustainable modes of transportation. The celebrations and promotions during Car Free Day and New Mobility Week serve to catalyze these shifts. Other major cities internationally and in Canada are active participants in Car Free Day activities. These cities participate because such events are effective in raising public awareness about the benefits of reducing reliance on the automobile. Changes in transportation modes will reduce air pollution exposure, increase physical activity and reduce vehicle-related injuries. Funding Car Free Day activities will ensure the implementation of a high-impact, effective Car Free Day. A separate report outlining proposed Works and Emergency Services initiatives in support of Car Free Day will be considered by the Works Committee.

Contact:

Monica Campbell
Manager, Environmental Protection Office
Toronto Public Health
Tel: 416-338-8091
Fax: 416-392-7418
Email: mcampbe2@toronto.ca

A handwritten signature in black ink, appearing to read "D. McKeown". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Dr. David McKeown
Medical Officer of Health

List of Attachments:

Attachment 1: Members of the Car Free Day Working Group

Attachment 1

Members of the Car Free Day Working Group

Dr. Judy Adler
Toronto Cycling Committee

Monica Campbell
Environmental Protection Office
Toronto Public Health
Community & Neighbourhood Services

Joe D'Abramo
City Planning
Regional Growth, Economy & Environment
Urban Development Services

Barrie Chavel
Right of Way Management
Transportation Services, South District
Works & Emergency Services

Priscilla Cranley
Strategic & Corporate Policy
Chief Administrator's Office

Daniel Egan
Pedestrian & Cycling Infrastructure
Transportation Services
Works & Emergency Services

Natasha Emery
Special Events
Programming, Tourism
Economic Development, Culture & Tourism

Gabriella Kalapos
Clean Air Partnership

Jamie Kirkpatrick
Sierra Club of Canada
Ontario Chapter

Carol Mee
Environmental Protection Office
Toronto Public Health
Community & Neighbourhood Services

Michael Noble
Volunteer Chair – Car Free Day Campaign
Sierra Club of Canada

Gord Perks
Toronto Environmental Alliance and
Member of the Roundtable on the Environment

Jaye Robinson
Special Events
Programming, Tourism
Economic Development, Culture & Tourism

Mike Ronson
Service Planning
Toronto Transit Commission

Wayne Scott
Toronto Pedestrian Committee

Kelly Snow
Regional Growth, Economy & Environment
City Planning
Urban Development Services

Sean Wheldrake
Bicycle Promotion Co-ordinator
City Planning - Transportation
Urban Development Services

Mae Wong
Toronto Community Foundation