

## VII. Health and the Environment

### 1) Food Safety

#### Goals:

- ▶ To prevent the incidence of food-borne illness and to promote safe food handling practices
- ▶ To reduce the incidence of food-borne illness.

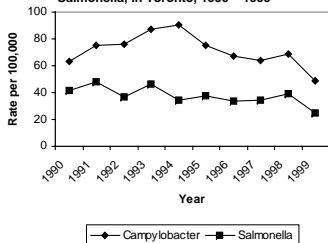
#### Selected Health Status Indicators

**Food Premises Inspections:** Each month we conduct more than 2,000 inspections of food premises in Toronto to ensure that the food offered for sale is free from disease and handled in a safe manner. In the first four months of 2001, about 75% of the food premises inspected were in substantial compliance with the Provincial Food Premises Regulation after the initial inspection. Out of the remaining 25% of establishments that did not pass the first inspection, 90% were in compliance within 48 hours at the re-inspection.

**Gastrointestinal Diseases:** One hundred seventeen outbreaks of gastrointestinal disease were reported in Toronto in 1999, resulting in 3,430 people being affected and putting 26,046 at risk. Most victims contracted the diseases in long-term care facilities. Seven deaths resulted.

The incidence for campylobacter rose from 1990 to 1994, then declined to 1999 (Figure 16). The incidence for reported salmonella has gradually decreased over the past 10 years. Rates for both campylobacter and salmonella are notably higher in Toronto than Ontario, 50% higher for campylobacter.

**Figure 16: Crude Incidence Rate\* of Reported Campylobacter and Salmonella, in Toronto, 1990 – 1999**



\* Rates per 100,000 population.

Data Sources: Toronto Public Health and the Ministry of Health, PHPHDB

**Verotoxin Producing E.coli (Hamburger Disease):** The rate of verotoxin producing E.coli (VTEC) has ranged between 2.5 and 4.6 per 100,000 since 1990. Toronto had 64 cases (2.5 per 100,000) of VTEC and Ontario had a rate of 3.4 per 100,000, in 1999.

#### Selected Activities

**Food Premises Inspections:** Standardized procedures for food premises inspection and a new disclosure system have been implemented across the city and will help protect consumers from food-borne illness. The disclosure system, the first of its kind in Canada, will provide consumers with easy access to inspection information via mandatory on-site postings at food premises, telephone requests, the city's web site and over the counter at TPH offices. Upon inspection, all violations are categorized as "minor", "significant" or "crucial" based on their risk to public health. Food premises are given a status of "pass" (green notice), "conditional pass" (yellow notice) or "closed" (red notice) based on the infractions observed.

The system also promotes greater compliance with food safety standards and is an incentive for operators to maintain safe, clean and well-run establishments.



**Food-Handler Certification:** We will continue to provide and promote food safety education to food premises owners and operators. We are working towards mandatory food-handler certification for all food premises in 2002. Each establishment that prepares food for the public will be required to have an owner/operator and one food handler in a supervisory role certified as being trained in safe food handling techniques. In order to meet the demand for training, we are developing partnerships with academic and private-sector organizations to provide courses which are accredited by Public Health.

## 2) Safe Water

### Goals:

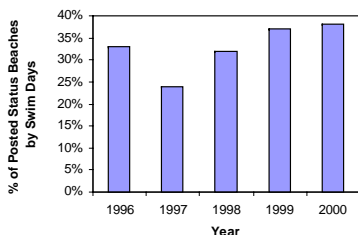
- ▶ To prevent or reduce adverse health outcomes from drinking water.
- ▶ To improve the safety of Toronto's recreational beach waters.
- ▶ To reduce the incidence of water-borne illness.

### Selected Health Status Indicators

**Drinking Water:** Test results of Toronto's drinking water between 1995 and 2000 show nearly perfect compliance with microbiological quality standards, for both total coliforms and fecal coliform bacteria. In 1999/2000, routine tests were taken for 152 organic chemicals, 36 inorganic chemicals and 113 pesticides. Levels of chemicals, other than those that are the result of the treatment process, are found at trace levels below those known to be a health concern. In 1999, the average level of the disinfectant by-product Trihalomethanes (THM) was below the Ontario Drinking Water Objectives of 0.1 mg/L. Over the past 10 years, average THM levels in Toronto have been less than 0.02mg/L.

**Recreational Water:** Toronto's 14 monitored beaches are frequently posted with warning signs in the summer months when the water becomes contaminated with bacteria from run-off, overflowing storm sewers or sanitary sewers connected to storm sewers. Over the past five years, beaches have been posted for 24% to 38% of the swimming season (Figure 17).

Figure 17: Percent of Potential Swim Days that Beaches Were Posted (Closed), Toronto, 1996 – 2000



Data Source: Toronto Public Health

See also *Injury Prevention*

### Selected Activities

We are working with provincial and federal agencies to advocate for protective drinking and recreational water objectives and protocols.

**Drinking Water:** We continue to monitor Toronto's drinking water and, in order to produce a more effective and efficient response to adverse drinking water, we are modifying the existing drinking water agreement and notification protocol with the Works and Emergency Services Department so that protective measures such as a "boil water" advisory can be taken in the most timely manner. We are preparing a report on the health effects of chemical use in water-treatment plants. We also facilitated the harmonization of the city's Sewer Use By-law and continue to help address issues arising from its implementation (e.g. the requirement for installation of dental amalgam separators to reduce mercury discharge) in order to reduce toxic dumping into the sewer system.

**Recreational Water:** We have requested Works and Emergency Services to increase sampling frequencies at Toronto beaches in 2001. In addition, we are expanding our existing partnerships with Works and Emergency Services and Police Services to include Parks and Recreation. This will enhance the timeliness of existing communications and improve beach signage so the public will have better information on the current status of the beaches. We continue to advocate for the prevention or reduction of toxic discharges into ground and surface water by industries and development projects.



**Swimming Pools and Spas:** We continue to inspect and investigate swimming and wading pools and spas and issue an order to close when hazards are identified. A new information package for pool owners and operators has been developed that outlines ways in which pools can be maintained to legislated standards.

### 3) Air Quality

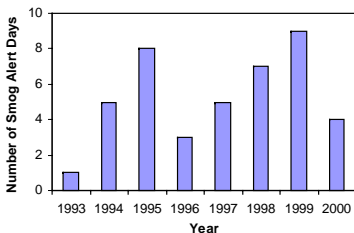
#### Goals:

- ▶ To prevent or reduce the adverse health outcomes from exposures to air pollutants.
- ▶ To improve the quality of air in outdoor and indoor environments.

#### Selected Health Status Indicators

**Air pollution:** Each year, about 1,000 premature deaths and 5,500 hospital admissions are attributable to air pollution in Toronto. In 1995, this was roughly the same number of deaths as lung cancer and twice the number of deaths as female breast cancer. The levels of key air pollutants, i.e. ground-level ozone, particulate matters, nitrogen dioxide and carbon monoxide, have shown no significant decrease in Toronto since 1980. (27) Weather affects the formation of smog. The warmer the summer the more frequent the smog alerts (Figure 18). Between 5 and 10 smog alert days are expected each year in Toronto. A smog-alert is issued by the Ontario Ministry of the Environment when the Air Quality Index reaches or exceeds 50.

Figure 18: Number of Smog Alert Days, Toronto, 1993 – 2000



Data Source: "Air Pollution Burden of Illness in Toronto", Toronto Public Health, Toronto 2000

**Indoor Air:** Studies are demonstrating that concentrations of some air contaminants such as carbon monoxide, formaldehyde and phthalates can be higher in indoor air than in outdoor environments because of indoor sources such as carpets, glues, paints and cigarette smoke.



#### Selected Activities

**Indoor and Outdoor Air Pollution:** We are initiating a major clean-air social marketing campaign called "20/20: The Way to Clean Air" and researching local air-quality concerns and their health effects (e.g. *Air Pollution Burden of Illness In Toronto*). Another report, *Toronto's Air: Let's Make It Healthy*, was released in January 2001 to increase public knowledge and awareness about poor air quality.

In addition, as health advocates, we are facilitating the development and implementation of a comprehensive air quality strategy for the city as recommended by the city's environmental plan. We continue to facilitate the implementation of the smog alert response plan and promote public awareness of the Idling Control By-law. As well, we are participating in regulatory review and policy analysis with all levels of government on air-quality issues.

With the conversion of former commercial and industrial sites into combined living and working facilities, an associated increase in indoor air-quality issues is emerging. We respond to these and all other indoor air-quality complaints within 24 hours as required by provincial legislation. Our partnerships with the Ontario Ministry of the Environment and Ministry of Labour help ensure an effective, co-ordinated response to minimize exposure to air-borne toxins.

See also *Child Health*

#### 4) Health Hazard Investigation

##### Goals:

- ▶ To prevent or reduce exposure to toxic chemical, biological and physical agents and other environmental hazards.
- ▶ To promote enhanced environmental quality and health and to prevent or reduce health outcomes resulting from exposure to health hazards.

##### Selected Health Status Indicators

**Hazardous Spills:** Between 1995 and 1997, there was an average of 600 hazardous spills each year in Toronto. In 1998, this figure dropped, coinciding with the adoption of a new Ministry of Environment regulation exempting the reporting of spills deemed to have only minor potential to cause damage.

**Health Hazard Complaints:** In 1998, TPH investigated 5,190 health hazard complaints. This number rose to 5,709 in 1999.

**Children's Health:** Recent studies suggest that even small amounts of lead in the body (ranging from 2 to 15 µg/dL blood lead level) may be associated with adverse intellectual and behavioural effects in children. In 1994, the Ministry of Environment estimated about 18,000 children or 4% of children 1 to 4 years of age in Ontario had blood lead levels at or above the reference level of 10 µg/dL. A major source of exposure is lead based paint used on the interior and exterior surfaces of dwellings built before the 1950s. (28)

Pesticides are one of the few toxic substances that we intentionally release into the environment. Children are especially vulnerable to the harmful effects of pesticides because of their physiological differences, developmental immaturity and patterns of behaviour. A study in 1997 showed that children playing on the floor can inhale four to six times as much pesticide as an adult and absorb through the skin 30 times as much pesticide as an adult. (29) Recent studies also suggest that pesticides can persist for a long time in the indoor environment because there is no sunlight, rain or microbiological activity to speed their degradation. Currently, there is no Toronto-specific data on indoor or outdoor uses of pesticides in residential areas.

##### Selected Activities

**Investigation of Health Hazard Complaints:** We continue to respond to complaints alleging health hazards within 24 hours and work with the Ministries of Environment and Labour to assist in early detection and more effective response to emerging health issues.

**Emergency Preparedness:** As a result of municipal amalgamation, a new Toronto Public Health Emergency Response Plan was created in order to effectively respond to a major disaster. A new after hours on-call system was also implemented in order to respond to urgent public health issues on a 24 hour-a-day, seven-day-a-week basis. In order to support these initiatives, all sectors of TPH are involved in emergency planning. Co-ordination with other city departments, enhanced staff training and awareness and participation in training exercises help to ensure a heightened state of preparedness in the event of a declared emergency.

**Site Redevelopment:** We continue to review environmental reports and provide public health comment on urban site re-developments. This includes areas that are potentially contaminated (known as "brownfields") and building demolitions. We are working with other city departments and agencies to create a harmonized development review process that has a strong public health emphasis to protect the public from exposure to contaminants during and after re-development activities.

**Child Health and the Environment:** We are developing a framework for a community needs assessment in Toronto on child health and the environment.

**Access to Information:** Public access to environmental information has been increased through the recent creation of the "Healthy People – Healthy Environments" web site ([www.city.toronto.on.ca/health/hphe](http://www.city.toronto.on.ca/health/hphe)). We are also assessing the feasibility of developing a city-wide environmental geographic information system that would act as an inventory for local environmental data and provide the public with convenient access to information through the internet, free of charge.

**Monitoring and Research:** Our work includes assessing Toronto residents' knowledge, attitudes, and current practices respecting the uses of pesticides; determining the number of cancer cases attributable to diesel exhaust; assessing the cancer risk presented by 10 potential carcinogens to Toronto residents and workers and providing ongoing monitoring of emerging environmental and health issues.

## 5) Animal Services and Rabies Control

### Goals:

- ▶ To prevent the occurrence of rabies in humans and to create an environment where humans and animals can co-exist in harmony.
- ▶ To increase responsible pet ownership and promote the value of the human-animal bond.

### Selected Health Status Indicators

**Animals Sheltered:** In 1998, approximately 18,150 animals were sheltered in Toronto. In 1997, of the more than 15,000 stray pets sheltered, over 57% of dogs and 5% of cats were reunited with their owners. In addition, over 3,100 pets were placed in new caring homes. More than 1,100 pets were sterilized at our three clinics in 1997.

**Animal Bites:** In 1997, 2,514 animal bites were investigated in Toronto. Of these, 126 animals were submitted for rabies testing and 139 courses of rabies vaccine were released. In 1998, it is estimated that more than 2,500 animal bites were investigated.

**Field Services:** In 1997, field services responded to over 30,000 requests for services.

**Licenses:** In 1998, an estimated 60,800 pets were licensed or identified in Toronto.

**Raccoon Rabies:** The first case in Canada was reported north of Brockville in July 1999. To date, over 35 cases have been reported in Eastern Ontario. There have been no reported cases in or near Toronto.

It is estimated that, on average, there are 16 raccoons per square kilometre in Toronto and as many as 85 raccoons per square kilometre in a few areas of the city. Given the city's geographic size of 632 square kilometres, there are likely over 10,000 raccoons living in Toronto.

### Selected Activities

**Animal Services Headquarters:** To improve access and response to the public's needs, we are attempting to establish a centralized headquarters, including an administration office with one phone number and a linked information system. We will create a centralized city-wide dispatch to provide more effective and timely service.

**Pet Identification:** We are developing strategies to attract corporate and volunteer partnerships to promote micro-chipping, licensing and annual cat and dog registration. Effective pet identification programs are essential in increasing the reunification rate of pets with their owners.

**Reunification Service:** We offer a "free ride home" for identifiable pets, that have been lost, to reunite them with their owners, on the first occurrence. An intensive cat registration program is under development to address the low cat redemption rate which, although better than the national average, is not acceptable in Toronto.

**Pet Adoptions:** We are developing promotional strategies and value-added enhancements to promote the adoption of pets into new caring homes through our animal centres. Pets that were not reunited with their owners or were surrendered by their owners, receive vaccinations and microchip identification prior to adoption. An extensive post-adoption incentive program is in place to encourage adopters to enter into relationships with a veterinarian for pet care and spaying/neutering. Pet sterilization is also available at the three spay/neuter clinics operated by animal services.

**Bylaw Enforcement:** To promote responsible pet ownership and improve the observation of all aspects of the animal care and control by-law, we continue to review, modify and deliver educational programs and enforcement initiatives that foster compliance.

**Bite Prevention Education Program:** We are increasing public awareness of animal bite prevention to prevent attacks, especially to children, and to reduce the thousands of animal bites occurring each year in Toronto. Children are encouraged to enjoy animal friends and are taught methods to interact safely. In 2000, in addition to the in-house educational programs at the animal centres, instruction was provided at 39 schools and 28 community events.

**Wildlife Strategy:** The Toronto wildlife strategy encourages long term solutions to nuisance wildlife problems.

**Raccoon Rabies:** To prevent exposure to raccoon rabies, we are developing strategies and raising public awareness of how to reduce contact and exposure to rabies vector animals, especially raccoons.