



**STAFF REPORT
ACTION REQUIRED**

City of Toronto Environmental Reporting, Disclosure and Innovation Program

Date:	October 30, 2008
To:	Board of Health
From:	Medical Officer of Health
Wards:	All wards
Reference Number:	

SUMMARY

The Medical Officer of Health (MOH) recommends that City Council adopt an Environmental Reporting, Disclosure and Innovation Program, including a bylaw that comes into effect on January 1, 2010. The program would capture important information on priority toxic substances in Toronto’s environment, help businesses adopt pollution prevention measures, and inform residents about local environmental conditions. This type of program is often referred to as “community right-to-know.”

The Environmental Reporting, Disclosure and Innovation Program delivers on the goals laid out in the City’s Climate Change, Clean Air and Sustainable Energy Action Plan, the Agenda for Prosperity, and the Green Economic Development Strategy. These plans recommend new monitoring and public reporting program for toxic air contaminants, support for the “greening” of local businesses via pollution prevention education, and collaboration with industry to enhance growth, productivity and innovation.

Key to this program is a partnership between Toronto Public Health (TPH) and Economic Development, Culture and Tourism (EDCT) that will support coordinated delivery of the program to the business community to accelerate implementation of environmental improvements, and stimulate innovation and growth of the green economy. TPH will also collaborate with other divisions including the Toronto Environment Office and Toronto Water, as well as Environment Canada, the provincial government, businesses and other stakeholders.

TPH research identifies 25 hazardous substances commonly used by industrial, commercial and institutional facilities that exist in our air at levels that are of health concern. This new program would require affected facilities and City of Toronto operations to report to the City each year if they use or release any of these priority

substances above specified thresholds. TPH would phase in reporting obligations over four years and collaborate with EDCT to provide training and resources for facilities to reduce or find safer substitutes for these chemicals. The Environmental Reporting, Disclosure and Innovation Program includes an important Information and Technology (IT) capital investment for a new database to enable the City to collect and analyze local pollution information, track trends and inform the community. TPH would use the data to better understand and address potential health hazards and support business innovation, and would make the information publicly accessible via a searchable internet site. Attached is a technical document that provides details of the proposed program, including a draft bylaw.

This new program fills important gaps in the reporting and disclosure of information and support for environmental innovation for small and medium-sized Toronto businesses. Current reporting programs like the National Pollutant Release Inventory (NPRI) and the Ontario government's proposed Toxics Reduction Strategy focus on only large businesses. Most programs to support pollution prevention are also targeted at larger facilities. In an urban setting like Toronto, the majority of facilities using chemicals are too small to be included in these programs. Although use or emissions of chemicals from individual small and medium-sized businesses may be modest and meet existing standards, the long-term cumulative exposure to chemicals from many facilities in close proximity to where people live creates significant concern for health. TPH estimates that this program would collect data from 5,000 to 7,000 local facilities, in contrast to the NPRI, which collects data from about 350 facilities in Toronto.

The Environmental Reporting, Disclosure and Innovation Program recognizes the important linkages between the environment, economy and social well-being. This program has been developed based on extensive research and three years of consultation with the business community, environmental and health organizations, City staff and other governments, worker agencies and residents. This feedback has helped TPH design a program that will benefit health by contributing to improvements in local air quality and improve community right-to-know by making information publicly accessible. TPH will minimize the burden to local businesses through education and training programs, online reporting and phased implementation over several years. The program can help retain and enhance economic opportunity by identifying incentives to actively stimulate job creation, green innovation and productivity improvements.

At this time of economic uncertainty, the City should be sensitive to the needs of local businesses. The phased implementation of this proposed program provides time for businesses to adjust and prepare for reporting. During the phase-in period, training and technical assistance can help facilities identify existing costs (such as chemical handling and disposal), and consider opportunities for short and long-term investments in pollution prevention. As part of the early phases of program implementation, TPH, EDCT and other divisional partners will conduct research and pilot projects to examine best practices for implementing environmental improvements in a cost-effective and cost-competitive manner.

RECOMMENDATIONS

The Medical Officer of Health recommends that:

1. the Board of Health support the Environmental Reporting, Disclosure and Innovation Program described in this report and in the technical document Attachment 2 and forward these to City Council for approval;
2. the City Solicitor be authorized to prepare and introduce a Bill in Council in the form or substantially in the form of the proposed bylaw attached to this report as “Attachment 1”;
3. City Council approve the addition of a new IT capital project, the Environmental Reporting, Disclosure and Innovation Program, to the Toronto Public Health 2009 Recommended Capital Budget with a total project cost of \$1.296 million that will require a 2009 cash flow of \$0.228 million and future commitments of \$0.615 million in 2010 and \$0.453 million in 2011;
4. the net operating impacts in the Toronto Public Health Operating Budget of \$0.163 million for 2010 (including six positions) and \$0.052 million in 2011 emanating from the approval of this project in 2009 be considered within the overall scope of Toronto Public Health’s 2010 and 2011 operating budget submissions for the reporting and disclosure component of the program;
5. the Board of Health forward this report to the November 25, 2008 meeting of the Executive Committee for its consideration during the 2009 Capital Budget process;
6. City Council forward this report to Environment Canada and request Toronto Public Health to pursue an agreement with Environment Canada to use their web-based One Window for National Environmental Reporting System (OWNERS) system to enable facilities to electronically submit data for this program;
7. the Medical Officer of Health continue regular communication with senior staff from the Ontario Ministry of Environment and Environment Canada on the harmonization of the federal, provincial and local environmental reporting programs so as to avoid duplication and ensure seamless integration of reporting methods for affected facilities;
8. City Council request the Ontario Minister of the Environment to collaborate with the City during implementation of the provincial Toxics Reduction Strategy by providing funding and technical assistance for research and pilot projects to develop and promote environmental best practices and economic incentives to small and medium-sized businesses in Toronto;

9. the Medical Officer of Health provide annual updates to the Board of Health, beginning in 2009, on the implementation of the Environmental Reporting, Disclosure and Innovation Program;
10. the Board of Health forward this report to the Toronto Board of Trade, the Toronto Industry Network, the Toronto Association of Business Improvement Areas and the Toronto and York Region Labour Council and request that they collaborate with Toronto Public Health to coordinate outreach, training and assistance programs to affected facilities and the community; and
11. the Board of Health forward this report for information to the Ontario Public Health Association, Association of Local Public Health Agencies, Cancer Care Ontario and the Ontario Medical Association.

Financial Impact

There is no funding available to offset the proposed new IT capital project, with a total project cost of \$1.296 million, in Toronto Public Health's 2009 Recommended Capital Budget. The new IT project requires cash flows of \$0.228 million in 2009, \$0.615 million in 2010 and \$0.453 million in 2011.

The associated operating impact of this new capital project is \$0.653 million gross and \$0.163 million net in 2010 (including six positions) and \$0.206 million gross and \$0.052 million net in 2011 for program coordination, outreach and support to facilities and the public, bylaw enforcement and evaluation. The financial impacts are summarized in Table 1.

Table 1: Capital and Operating Costs of Environmental Reporting, Disclosure and Innovation Program

	2009	2010	2011
Capital	\$228,086	\$614,716	\$453,407
Operating	\$0	\$652,664 (gross) \$163,166 (net)	\$206,322 (gross) \$51,580 (net)
Positions		6.0	

This project supplements a new service priority initiative, Preventing Pollution to Reduce Exposure to Toxics, included in Toronto Public Health's 2009 Operating Budget Request. The Board of Health, at its meeting of July 3, 2008, adopted (with amendments) the report entitled, Progress Report on a City of Toronto Environmental Reporting and Disclosure Program, that directed:

“funds in the amount of \$221,400 gross/\$55,350 net (including 2 positions) be included in the 2009 Operating Budget Submission for Toronto Public Health to develop and implement, in consultation with Economic Development, Culture and Tourism, Toronto Water, Toronto Environment Office, and provincial, industry and community partners, a pollution prevention program”

This report can be found at

<http://www.toronto.ca/legdocs/mmis/2008/hl/bgrd/backgroundfile-13981.pdf>.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

The Environmental Reporting, Disclosure and Innovation Program has its origins in the City’s 2000 Environmental Plan, which recommended that Toronto develop a community right-to-know bylaw that empowers community members to know the location, sources and health effects of toxic chemicals in their community. A right-to-know strategy was also included in the 2002 “Action Plan for Cancer Prevention in the City of Toronto” adopted by Council that year.

At its January 17, 2005 meeting, the Board of Health recommended that the Medical Officer of Health (MOH) consider practical and effective community right-to-know strategies, including regulation, that the City could implement.

On June 19, 2006, the Board received a report entitled “Access to Environmental Information: Preventing Pollution, Avoiding Risks” that reviewed opportunities for increasing access to information on chemicals. The report concluded that despite existing reporting regulations and voluntary programs, there is a significant lack of data on toxic chemical emissions from Toronto facilities, and that additional reporting could stimulate pollution prevention to reduce potential exposure to these substances. The Board of Health requested further work and consultation with stakeholders on options for future action.

In June 2007, City Council unanimously endorsed its Climate Change, Clean Air and Sustainable Energy Action Plan. This plan included a recommendation to “request the Board of Health to develop a proposed reporting program for the use and release of toxic air contaminants and explore the reporting of greenhouse gas emissions.” The plan also included recommendations to support the greening of local businesses and industry.

In July 2007, the MOH reported that 25 substances commonly used and released from industrial, commercial and institutional facilities existed in Toronto’s air at levels of health concern. The Board of Health recommended at its July 9, 2007 meeting that the MOH consult with the City Solicitor and key stakeholders and report in spring 2008 on a proposed bylaw that would require facilities to report to the City on the use and emissions of these substances of priority health concern.

At the July 3, 2008 Board of Health, the MOH presented the details of an Environmental Reporting, Disclosure and Innovation Program, including a draft bylaw. The MOH noted that the provincial government had recently begun to develop a toxics use reduction initiative and recommended learning more about this provincial program to determine whether or not a Toronto program was appropriate. The Board of Health requested that the MOH report back in October 2008 on the status of the provincial initiative and any needed bylaw amendments, and that all information be ready for Council discussion at that time.

At the July 3, 2008 meeting, the Board of Health also supported allocating operating funds beginning in 2009 to develop and implement a related program that provides general pollution prevention resources and outreach to Toronto facilities, and supports the implementation of other City of Toronto programs that encourage environmental improvements such as energy, electricity and water conservation, smog and greenhouse gas reduction, water quality and climate change adaptation.

This report has been prepared in consultation with the City Solicitor and Economic Development, Culture and Tourism.

ISSUE BACKGROUND

Community right-to-know programs exist around the world. They collect and publish information about substances being used or released by facilities. These reporting programs complement other regulations aimed at reducing or managing chemicals by providing valuable data to governments, informing the public and stimulating businesses and institutions to prevent pollution.

Reporting programs can stimulate pollution prevention in several ways:

- Reporting requires facilities to carefully track identified substances, which provides a facility with detailed data to help them identify inefficiencies and opportunities for improvements.
- Governments and industry associations commonly provide additional guidance to businesses to identify and implement measures to reduce substances or use safer alternatives.
- Disclosing data introduces public scrutiny and enables communities to become informed and engaged in local health and environmental issues, which further motivates companies to reduce chemicals.

The National Pollutant Release Inventory (NPRI) is Canada's primary reporting program. NPRI has been credited with lowering emissions by 27 per cent¹ since it began in 1993. In the United States, emissions reporting to the Toxics Release Inventory have decreased by 46 per cent between 1988 and 1999. The Massachusetts Toxics Use Reduction Act enabled the state to meet its goal of reducing toxic waste generation by 50 per cent in just 10 years.²

There are important gaps in existing reporting programs in Canada that can be addressed with a complementary local program. Existing programs primarily involve large facilities and emissions, but do not engage the majority of small and medium-sized operations that exist in Toronto. For example, only 352 Toronto companies reported to the NPRI in 2006.

If data on chemical use and emissions were routinely collected, facilities could better identify pollution prevention opportunities, local government could better understand and address local health and environmental conditions, and Torontonians would be more informed.

COMMENTS

The proposed Environmental Reporting, Disclosure and Innovation Program would address many of the health, environmental and economic challenges unique to an urban centre like Toronto that are not addressed by other programs. For example, the majority of Toronto facilities using or releasing the priority substances are small or medium-sized, and are located within or close to residential neighbourhoods. Although the use or release of chemicals from each facility may meet provincial standards, current regulations do not address the total cumulative exposure to chemicals and potential for adverse health impacts from many facilities of all sizes in close proximity to where people live.

The Environmental Reporting, Disclosure and Innovation Program delivers on the City's commitments laid out in its Climate Change, Clean Air and Sustainable Energy Action Plan, its Agenda for Prosperity, and the Green Economic Development Strategy. All three plans, together with the City's initial Environmental Plan (2000), emphasize the importance of partnership and integrating environmental planning with economic, social, land use, transportation and other planning initiatives. The Climate Change, Clean Air and Sustainable Energy Action Plan includes commitments to new monitoring programs for toxic substances, increased public access to information about the use and release of substances, and expanded pollution prevention supports to stimulate the "greening" of local businesses and industry. The Agenda for Prosperity and the Green Economic Development Strategy recommend actions to improve the environmental performance of all economic sectors, as well as support the local and international growth of Toronto companies that produce environmental goods and services.

There are opportunities to align the Environmental Reporting, Disclosure and Innovation Program with these plans and other corporate initiatives through, for example, the routine exchange of information between City divisions, common messaging to the public and business community and consideration of economic incentives targeted to small and medium-sized businesses, particularly in our manufacturing sector.

Benefits of Toronto Program

The recommended program offers the City, its businesses and residents many benefits:

- **Tracking substances of greatest health concern in Toronto**
TPH reviewed estimates of chemical emissions from facilities, local air quality data from Environment Canada and the Ministry of Environment, and referenced health benchmarks to identify 25 substances of priority health concern that will be the focus of this new program.
- **Stimulating facilities to pursue pollution prevention**
Tracking chemicals is the first step towards measuring the chemical use and output efficiency of a facility and identifying opportunities for improvements. Small and medium-sized businesses in Toronto will particularly benefit, as many are less aware than larger industries of pollution prevention options, and have limited capacity to research safer alternatives to priority substances. Facilities within Toronto will benefit from the exchange of scientific information and operational improvement experience gained through the program. TPH and Economic Development, Culture and Tourism (EDCT) Division will collaborate to conduct research and implement pilot projects to identify a range of cost-effective opportunities for facilities.
- **Complementing existing chemical regulations and initiatives**
The proposed Environmental Reporting, Disclosure and Innovation Program supplements rather than duplicates existing regulations like the NPRI and the proposed provincial Toxics Reduction Strategy. It has been designed to avoid and minimize any burden for facilities that already report by mirroring much of the NPRI language in the draft bylaw and by enabling facilities to simultaneously report via the web-based reporting system used by the NPRI.
- **Collecting important, local information that is currently not gathered**
No current regulations or voluntary initiatives provide complete and systematic data on the 25 priority substances from large, medium and small facilities in neighbourhoods throughout the city. This new made-in-Toronto program will enable TPH to collect and interpret this information to guide policy making, support pollution prevention outreach and inform the community.
- **Contributing to the greening of our local economy**
Pollution prevention, if properly implemented, can over time save companies money and stimulate technological innovation. In addition to the Climate Change, Clean Air and Sustainable Energy Action Plan and the Agenda for Prosperity, the Environmental Reporting, Disclosure and Innovation Program supports new initiatives such as the Green Economic Development Strategy and the Pearson Eco-Business Zone. TPH and EDCT staff are working together to best ensure that Toronto-based firms and researchers capture the economic benefits of the

proposed environmental regulations, thus reinforcing Toronto's leadership role and further accelerating environmental improvements.

- **Encouraging ideas and environmental innovation**
This program will provide information on facilities and hazardous substances that can stimulate new thinking and “win-win” partnerships between the City, businesses and their communities. In the United States, for example, data from the Toxics Release Inventory (TRI) has fostered “good neighbour campaigns” where residents partner with local facilities and city councils to initiate environmental improvements and renew the community's support for small industry. The Environmental Reporting, Disclosure and Innovation Program would streamline communications between small businesses and the City, which many business stakeholders suggested could increase their participation in environmental programs and their interest in collaborating on new ideas for sustainability.
- **Providing local information to Torontonians**
Public access to information (the community's “right to know”) is key to stimulating pollution prevention and consistent with City Council's commitments to openness and transparency. TPH will provide the information in a way that is accessible and understandable to all users, and identifies ways in which they can reduce their own use and release of the priority substances.

Consultation with the Community

Input from City staff, other governments, businesses, residents, organized labour and other agencies representing workers, and health and environmental organizations has guided TPH in the development of this program. Over the past three years, TPH has consulted via meetings, focus groups and the internet with hundreds of experts and interested parties. TPH received 540 written comments on a draft program framework released in January 2008. A more detailed description of the January consultation and its results is provided in the attached technical report. TPH heard from many stakeholders in response to the proposal presented at the July 2008 Board of Health meeting and has since held further discussions with community organizations and business stakeholders.

Residents, community organizations and worker agencies overwhelmingly support the goals and objectives of the proposed program. The most common reasons given are protecting health, promoting environmental sustainability, improving workplace safety, supporting collaboration and informed choice, and enhancing and aligning related public policy initiatives. Many offered suggestions for ensuring that the information was made easily available to users.

Most businesses and business associations support the program's intent but not the introduction of mandatory reporting on a local level. Businesses cited concerns such as potential duplication with existing reporting laws, overlap with the goals of current regulations, and economic and administrative burden for facilities. They indicated a preference for a partnership based on voluntary compliance. Despite this, many

businesses offered helpful suggestions for engaging businesses within and outside of a regulatory approach.

In response to the concerns expressed by business stakeholders and City ABCCDs TPH has developed the Environmental Reporting, Disclosure and Innovation Program in a manner that does not duplicate existing reporting regulations or overlap with the goals of regulations aimed at reducing the priority substances. TPH has also designed the program to minimize burden for affected facilities.

Rationale for a Reporting Bylaw

TPH compared voluntary and mandatory reporting initiatives and sought stakeholder feedback to determine options that would best achieve the program objectives of data collection, public disclosure and supporting pollution prevention.

Mandatory reporting best achieves these objectives for several reasons:

- Experience with Toronto's tobacco and pesticide bylaws, and in other jurisdictions, indicates that mandatory requirements stimulate much greater participation from businesses than voluntary programs.
- Without a requirement to report specific types of information, the data obtained would not be of sufficient quality or completeness to adequately assess and understand where potential exposure to priority substances may exist or provide a reliable source of information for the community.
- Voluntary reporting would be less efficient to administer, requiring a disproportionate amount of resources to encourage participation and interpret data rather than delivering information and supporting facilities.
- Research and stakeholder feedback indicates that small and medium-sized facilities often underestimate their environmental impact and seldom measure or track environmental data.³ Mandatory reporting often leads to the first ever assessment of chemical flows through a facility. This in turn can lead a facility to adopt readily available environmentally-friendly technology, which can lead to cost savings and enhanced efficiency.⁴

Although the proposed Environmental Reporting, Disclosure and Innovation Program includes mandatory reporting, it reflects many of the business community's suggestions for how best to implement the program in a way that minimizes burden for affected facilities and includes collaboration between the City and stakeholders. For example, the program includes electronic data reporting and easy-to-understand guidance documents. TPH would seek opportunities to deliver educational information in partnership with business groups such as the Toronto Board of Trade, Toronto Association of Business Improvement Areas, Toronto and York Region Labour Council and industrial associations.

Economic Considerations

At this time of economic uncertainty, the City should be particularly sensitive to businesses, especially manufacturers, that are cutting costs and may be hesitant to consider capital and operating investments necessary to implement environmental improvements. The phased implementation approach proposed in the Environmental Reporting, Disclosure and Innovation Program provides the opportunity for the City to work with affected facilities to identify cost-effective ways to improve the environment while retaining and creating jobs, and stimulating the green economy. In addition, training and technical assistance will help facilities identify existing costs (such as chemical handling and disposal) and consider opportunities for short and long-term investments, including emission reduction measures, shifting to alternative chemicals, and changing production processes.

The Environmental Reporting, Disclosure and Innovation Program aligns with the City's vision for economic growth and environmental innovation. For example, the Agenda for Prosperity identifies 'green' initiatives as one of eight strategic directions to make Toronto a strong, vibrant and internationally competitive city and recommends urgent and aggressive action. The Agenda notes that Toronto's reputation, its capacity for innovation, and increasing global interest in environmental issues, create a tremendous opportunity for Toronto to simultaneously expand into a high growth market, create jobs and improve the environment. Achieving this integrated outcome demands a strategic and collaborative approach to public policy intervention that considers the environment, economy and social well-being.

The Green Economic Development Strategy, *People, Planet & Profit – Catalyzing Economic Growth & Environmental Quality in the City of Toronto*, recommends coordinated and unified goals and targets to stimulate green market demand, enhance and leverage partnerships, lead by example, expand the workforce and support existing business. The strategy also recommends, among other things, a Toronto Environmental Research and Commercialization Initiative to strengthen research partnerships in the fields of sustainable energy and environment, seek avenues for commercialization of technologies, and link to local and international environmental research and business opportunities. This will require partnerships among business, labour, colleges and universities, research centres, other orders of government and the City of Toronto.

Minimizing costs to facilities

The program will require facilities to learn about the bylaw, review the list of substances, determine whether or not they exceed the reporting threshold, and submit the data if required. Some business stakeholders have expressed concerns that cost of these actions may be prohibitively high, especially for small facilities. TPH anticipates that for most facilities these costs are likely to be low, for several reasons:

- Large facilities that currently report to the NPRI are familiar with the processes for estimating chemicals and will report data using the same web-based system as they use for the federal program;

- Although for most facilities, particularly smaller operations, environmental reporting, disclosure and innovation will be a new responsibility the vast majority will use or release only about four of the 25 priority substances;
- TPH will provide training and web-based “calculators” to enable smaller facilities to do their own calculations, thereby reducing the need to hire external consultants; and
- Phased-in reporting requirements will provide facilities with time to learn about the program and how to report.

Experience with other reporting programs indicates that costs would be higher in the first year of reporting and lower in subsequent years as facilities become familiar with the program.

Cost savings through pollution prevention

Pollution prevention refers to the use of processes and practices that minimize the creation of pollution or waste. It is more environmentally sustainable and economically beneficial than end-of-pipe measures that control pollution once it has been created.

For facilities using chemicals, pollution prevention strategies include replacing a hazardous substance with a less-toxic (and potentially non-reportable) alternative, adjusting processes to use chemicals more efficiently and recycling rather than disposal. These strategies typically involve some up-front investments but result in ongoing cost savings. The Toronto Region Sustainability Program, which helps manufacturers identify pollution prevention options, indicates significant return on investment, and a payback time from implementing some improvements that is less than a year.⁵

A survey of companies participating in the Massachusetts *Toxic Use Reduction Act* (TURA) demonstrated economic benefits. Between 1990 and 1997, the total cost to all companies from TURA was estimated to be \$76.6 million and the total benefits to be \$90.5 million. This estimate did not include additional benefits, such as human health and ecological benefits from reducing chemical exposure, increased revenue to businesses, and the value of the TURA data to the public. At the facility level, only 40 per cent of facilities reporting to TURA experienced a change in overall costs as a result of TURA activities; of those, 64% reported net reduction in costs, while 8 per cent reported a mix of increases and reductions.⁶

TPH will work with business, labour, researchers, other City Divisions and ABCCDs and other partners to identify cost effective pollution prevention measures. TPH will work with the Toronto Environment Office, Toronto Water, Solid Waste Management, Energy Efficiency Office to provide one-window service for environmental improvement information and programs.

Status of Proposed Provincial Toxics Reduction Strategy

The timing of the Environmental Reporting, Disclosure and Innovation Program coincides with a new toxics reduction strategy being developed by the provincial government. At its meeting on July 3, 2008, the Board of Health requested the Premier and Minister of the Environment to ensure that the provincial toxics strategy would address the health of urban residents by including the 25 priority substances, setting substance reporting thresholds low enough to collect information on small and medium-sized facilities, creating capacity-building programs on environmental reporting and pollution prevention, and ensuring disclosure and easy public access to information collected through the program.

The Province released a framework for this strategy on August 27, 2008 for public review at <http://www.ene.gov.on.ca/en/toxics/index.php>. The framework includes the elements recommended by the Board of Health, with the exception of setting substance reporting thresholds low enough to engage small and medium-sized facilities.

The provincial strategy and Toronto's Environmental Reporting, Disclosure and Innovation Program are complementary rather than duplicative. They share several key approaches, including new public reporting of chemical usage, pollution prevention assistance for businesses and similar implementation schedules. The proposed provincial strategy would:

- require facilities with 10 or more employees to publicly report chemical usage. Like the NPRI, reporting thresholds for most chemicals would be 10,000 kg, with lower thresholds for a few very toxic substances;
- require reporting for approximately 475 substances (which includes all 25 of the priority substances) and, for 320 of these substances, require facilities to prepare toxics reductions plans and publicly disclose detailed "materials accounting" data on chemical inputs and outputs; the strategy would affect facilities involved only in mining and manufacturing;
- phase in reporting requirements for large businesses similar to the Toronto Environmental Reporting, Disclosure and Innovation Program, with data collection beginning in 2010; and
- provide technical assistance, education and incentives to affected facilities to build capacity, as well as education for smaller facilities not covered by the reporting requirements. It also includes public education on toxics and carcinogens. These capacity-building provisions are not yet detailed in the strategy, and the province is seeking stakeholder input on options.

The provincial strategy would expand existing chemical legislation in important ways. However, on its own the strategy's benefits on health and green economic development in an urban region like Toronto would be limited. By adopting the NPRI reporting thresholds and focusing on mining and certain manufacturing industries, the proposed

provincial program applies only to certain large facilities with high chemical usage. Businesses most impacted will be the approximately 350 Toronto facilities that currently report to the NPRI. The draft provincial strategy does not focus on smaller facilities or apply to sectors covered by the Toronto Environmental Reporting, Disclosure and Innovation Program, such as waste management, water treatment, auto refinishing and dry cleaning. By comparison, Toronto's Environmental Reporting, Disclosure and Innovation Program will fill current data gaps and engage 5,000 to 7,000 facilities in Toronto using or releasing the priority substances. See Table 2 for a more detailed comparison of the programs.

Some stakeholders have questioned whether or not the provincial strategy may eventually lower its reporting thresholds, and cautioned against investment in a local program. The MOE consultation framework states that the thresholds would not be lowered to cover facilities with fewer than 10 employees, and that awareness and voluntary action would be encouraged through education and technical assistance. The Ministry also states that it would only consider lowering thresholds in the future for its Schedule 1 toxics, which includes only 15 of Toronto's priority substances and 45 substances in total.

The Environmental Reporting, Disclosure and Innovation Program includes an important investment in a new database to enable the City to analyze local pollution information, track trends, inform the community and support businesses to adopt pollution prevention. This database will continue to be important in the event that the provincial Toxics Reduction Strategy expands in the future to include some local-level information.

The MOH and senior Ministry of Environment staff have had preliminary discussions to consider opportunities to collaborate on common program elements. Opportunities to work together include:

- sharing technical information and assessments of less toxic alternatives for the 25 priority substances;
- linking databases to enable shared analysis of reported data;
- partnering to develop and deliver common educational and training supports for small and medium-sized businesses; and
- streamlining data reporting for facilities and information disclosure for the public.

The City will continue discussions with the Ministry to address areas of common interest during the development and implementation of the proposed toxics reduction strategy.

Table 2: Comparison of key features of the Environmental Reporting, Disclosure and Innovation Program and the proposed Ontario Toxics Reduction Strategy

Key Program Elements	Environmental Reporting, Disclosure and Innovation Program	Ontario Toxics Reduction Strategy
Facilities covered	5,000 to 7,000 (estimated) small, medium and large facilities (some exemptions; similar to NPRI)	Large facilities in mining and manufacturing (approximately 350 in Toronto). Excludes some sectors that would be covered in Toronto program
List of priority substances	25 priority substances present in Toronto's environment at levels of health concern	475 substances in 4 chemical groups, known as "schedules." The list includes all Toronto priority substances (TPS): - Schedule 1: 45 NPRI priority substances (includes 15 TPS) - Schedule 2: 275 NPRI substances and acetone (includes 9 TPS) - Schedule 3: 20 additional priority carcinogens and reproductive toxins not on the NPRI list (includes 1 TPS) - Schedule 4: 135 additional priority carcinogens and reproductive toxins not on the NPRI list
Reporting Thresholds	- 100 kg for most of the 25 substances (lower for more toxic substances) - All facilities that meet the thresholds will be required to report	- 10,000 kg for most substances (lower for some very toxic substances) - Only facilities with more than 10 employees required to report
Implementation Timeline	2009 – Outreach to facilities and public begins 2010 – Bylaw comes into effect; Phase One data collection 2011 – Phase One reporting; Phase Two data collection 2012 – Phase One & Two reporting; Phase Three data collection 2013 – All facilities reporting	<u>Phase One</u> (Schedules 1 and 3 affected): 2010 – data collection 2011 – reporting (+ materials accounting data for Schedule 1) 2012 – toxics reduction planning (Schedule 1 only) <u>Phase Two</u> (Schedules 2 and 4 affected) Begins as early as 2012 Schedule 2 - reporting, materials accounting, toxics planning Schedule 4 – voluntary reductions, review of evidence, possible future re-scheduling
Pollution prevention planning	Facilities invited to submit pollution prevention information with data	Mandatory toxics reduction plans for Schedules 1 and 2
Public Disclosure	Publicly accessible information and data via internet and in print	Disclosure of materials use accounting data and toxics reduction plan summaries

Key Elements of the Environmental Reporting, Disclosure and Innovation Program

TPH has developed an Environmental Reporting, Disclosure and Innovation Program that would meet Toronto's needs and draws from successful reporting programs in Canada and the United States.

TPH will work with its divisional partners to "brand" the Environmental Reporting, Disclosure and Innovation Program with a name that will help facilities and the public identify and participate in the program.

The program is comprised of several key elements, described in further detail in the attached technical report, a draft of which was presented to the Board of Health at its July 3, 2008 meeting. TPH has held further discussions with stakeholders to clarify program elements and the implementation timeline. The key elements of the program are:

- **A new reporting bylaw**

The City would enact a new bylaw to require annual reporting of chemical usage and emission data. The draft bylaw identifies 25 priority substances that must be reported, the reporting thresholds for these substances and the facilities and activities that are exempt from the reporting requirements. It also establishes penalties for failing to comply with the bylaw. The wording of the bylaw closely mirrors that of NPRI regulation to ensure that data under both systems are comparable and enable streamlined reporting for current NPRI facilities. The bylaw would not come into effect until January 1, 2010, which will give businesses time to learn about the new reporting requirements, how to calculate their use and emissions of any of the 25 priority substances, and how to report on-line using Environment Canada's One Window to National Environmental Reporting System (OWNERS).

- **Guidance documents**

TPH is developing two key tools to accompany the bylaw that will assist facilities:

- A "bylaw guidance document" that includes questions and answers about the bylaw, who must report, what information must be reported, and common sources and activities that involve the 25 priority substances. A draft version of this document, entitled "Understanding the Environmental Reporting and Disclosure Bylaw" is available at www.toronto.ca/health/hphe/enviro_info.htm;
- A "guide to reporting" that would include lists of tools to help facilities estimate quantities of chemicals, phased-in reporting timelines and instructions for electronic reporting. TPH would update it each year to reflect user feedback and technological innovations, such as new tools to estimate emissions.

- **Training and pollution prevention guidance for facilities**

Helping facilities understand the bylaw, know how to report, and access pollution prevention information is a key part of the program. TPH and its divisional partners will collaborate with the business community, workers, the Ministry of Environment and the community to:

- reach facilities through written material, technical assistance by phone and on-site trainings. Sector-specific pollution prevention guides, for example, will provide facilities with detailed information about the substances they may use, options for reducing or replacing them, and other environmental best practices. TPH is consulting with technical experts, local business representatives, Toronto and Region Conservation, Toronto Water and Economic Development, Culture and Tourism, on how to best develop and market these guides. TPH will also seek to promote the program through industry-specific conferences, workshops and publications, including those aimed at workplaces where English is not the primary language;
- initiate research and pilot projects to better understand operational issues and costs related to environmental improvements such as substituting alternative chemicals into industry specific production processes. Research and pilot projects will be phased to align with the proposed By-law implementation schedule; and
- showcase early adopters of environmental improvements, and develop and share best practice information to accelerate implementation and reduce toxic chemical use by facilities.
- **Web-based reporting**
Environment Canada will be a key partner with TPH to develop an online support and reporting system that uses OWNERS. This web-based data filing system is used by Environment Canada to collect and disclose NPRI data, and by provincial and municipal governments to collect other environmental data from industry in a timely, cost-effective and secure manner. A new TPH website will provide facilities with guidance and “calculators” to estimate their substance use and emissions, then will link them directly to the OWNERS website to submit it electronically to Environment Canada. Facilities can access their information on OWNERS at any time via secure login, and TPH will extract the data from the system for its own analysis and for public disclosure. Using OWNERS, rather than developing a separate Toronto reporting system, will streamline reporting for facilities that currently report to the NPRI, simplify reporting for businesses new to the program, lower costs to the City and enhance TPH’s data management and analysis capacity.
- **Disclosure of Information**
The data collected through the Environmental Reporting, Disclosure and Innovation Program would be collected, used and disclosed in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA). The data will be used to support business innovation and TPH research, education and health policy. TPH will, subject to any privacy restrictions that may apply, create an online system that will enable individuals and community groups to search for information reported to Toronto Public Health pursuant to the Environmental Reporting and Disclosure bylaw. Where permitted, the website will link users of the site to pollution prevention information provided by the facilities. In addition, the website will provide health and environmental information about the reportable priority substances.

Program Implementation

TPH will coordinate the implementation of the Environmental Reporting, Disclosure and Innovation Program.

Phased timelines for reporting

TPH recommends that the bylaw come into effect on January 1, 2010. In 2009, TPH will begin development of the data management system and facility guidance materials, and conduct preliminary outreach to the affected facilities in collaboration with EDCT to make them aware of the program and reporting requirements. Full-scale implementation will begin when the bylaw takes effect in 2010.

Reporting would be phased in over several years to allow facilities, particularly small and medium-sized ones, to learn about the bylaw and ways to track and estimate substances. Beginning in 2010, Phase One facilities would track chemical use and release information and submit summary data for 2010 by June 30, 2011. The phase in would be sector-based and facilities would be identified using the North American Industry Classification System (NAICS), a categorization system developed jointly by Canada, the United States and Mexico. Sectors that are predominantly comprised of larger facilities or have more pollution prevention and data estimation tools available to them would report first, as they would likely require the least amount of preparation time. The planned phase-in is as described in Table 3. TPH anticipates that as many as 2,500 facilities would begin reporting during each phase, and when fully implemented there could be as many as 5,000 to 7,000 facilities engaged.

Enforcement

TPH would enforce the bylaw's requirement to report in a way similar to the approach Environment Canada uses to enforce the NPRI. TPH would conduct "desktop audits" of the facilities that report and which are expected to report. TPH would contact a facility or conduct an on-site inspection if it required clarification about data or believed that a facility should have reported. If the information is not obtained, enforcement would escalate to a warning or, under the *Provincial Offences Act*, a facility may be issued a ticket or a summons to appear in court. In addition, periodic audits would be conducted on the reports submitted by the facilities to validate the data being collected.

Evaluation

The goal of the program is to protect the health of Toronto residents by reducing their exposures to toxic substances. The integrated program therefore includes mechanisms to encourage and accelerate the use of alternative chemicals and processes as well as substance reporting. TPH will evaluate progress towards this goal by measuring indicators such as levels of air toxics present in Toronto's air, numbers of facilities who report, trends in reported data and the public's interest in this information. An evaluation framework is included in the attached technical report.

Table 3: Timeline for Environmental Reporting, Disclosure and Innovation Program

2009	Education begins for all sectors.
2010	Bylaw comes into effect. The following Phase One Sectors would begin tracking 2010 data on substance use and emissions: <ul style="list-style-type: none">• food and beverage manufacturing• printing and publishing• chemical manufacturing• wood industries• power generation• water and wastewater
2011	Phase One Facilities would submit data to City by June 30, 2011. The following Phase Two Sectors would begin tracking 2011 data: <ul style="list-style-type: none">• chemical wholesale• waste management and remediation services• medical and diagnostic laboratories• dry cleaning and laundry services• automotive repair and maintenance• funeral services
2012	Phase One and Two Facilities would report data. Phase Three Sectors, which includes all remaining facilities, would begin tracking 2012 data. This includes the “other manufacturing” sector, which is comprised of paper manufacturing, primary metal manufacturing, machinery manufacturing and other industries.
2013	All affected facilities reporting.

Program Costs

TPH has considered funding options for this program. A review of current reporting programs indicates that most are funded either by government or through specific fees collected from businesses. For example, the NPRI and the U.S. Toxics Release Inventory are funded by government. The Massachusetts Toxics Use Reduction Act and right-to-know bylaws in New York City and Eugene, Oregon charge fees to businesses based on the quantity of substance reported.

TPH does not recommend fees, as they may serve as a deterrent to comply with the reporting requirements and put additional economic pressure on facilities, particularly small and medium-sized businesses. TPH recommends that new City capital and operating funds be allocated towards the proposed Environmental Reporting, Disclosure and Innovation Program.

Capital costs will be allocated from mid-2009 to mid-2011 to develop a website and web-based data management and disclosure system. The key features of this system are:

- a website that includes calculators and estimation tools to help facilities determine their use and emissions of priority chemicals;
- a link to Environment Canada's OWNERS webpage, where facilities will electronically submit their data;
- a new TPH database that will extract and analyse the information collected by OWNERS; and
- a searchable website which will allow the public to view the data in many ways, including by lists of chemicals or facilities and via neighbourhood maps.

TPH would create the system in partnership with Environment Canada. Capital funds will support the technical expertise required to develop and pilot test the system and purchase the hardware and software to ensure that the system is operational to accept the first data in 2011.

New operating funds will be required beginning in 2010 to support full-scale development and implementation of the program as the bylaw takes effect. A team of six staff will bring the necessary program experience, technical expertise and communication skills to:

- develop resource materials and educate facilities on the program requirements and related pollution prevention opportunities;
- enforce the provisions of the bylaw and provide ongoing technical assistance to reporting facilities;
- analyze the information collected from facilities and generate annual summary reports;
- support public disclosure through the web database and education materials;
- partner with EDCT on collaborative research and pilot projects to accelerate implementation of environmental improvements and stimulate innovation and growth of the green economy;
- facilitate partnerships with other City divisions to coordinate delivery of the program with other business greening initiatives such as the Sewer Use Bylaw and energy efficiency outreach; and
- collaborate with other governments and stakeholders on outreach and support for local businesses.

TPH anticipates that program implementation will be 75 per cent cost-shared by the Ministry of Health and Long-Term Care. The program activities would fulfill the new draft Ontario Public Health Standard regarding Health Hazard Prevention and Management by:

- collecting data on priority substances that would enable TPH and the Board of Health to detect, identify and take measures to reduce environmental health hazards;
- increasing the capacity of the public, businesses and community partners to address exposure to environmental health hazards; and

- increasing public awareness of health risk factors associated with health hazards in outdoor air and opportunities for health protection and prevention activities in their community and their own lifestyles.

TPH would also explore external funding and partnership opportunities for this program, particularly to enable local facilities to adopt pollution prevention options. For example, the proposed provincial toxics reduction strategy considers a role for partnerships to deliver the program. Given the common goals and approach of the provincial strategy and the Environmental Reporting, Disclosure and Innovation Program, this report recommends that the Board of Health request the Minister of Environment to consider funding a program for education and technical assistance for facilities.

NEXT STEPS

It is important that action be taken to reduce exposure to the 25 priority substances in Toronto, enhance community right-to-know and assist local businesses to pursue environmental best practices. The Medical Officer of Health recommends that the Board of Health and City Council adopt the proposed Environmental Reporting, Disclosure and Innovation Program, including a bylaw.

TPH will continue discussions with City colleagues, other governments and business and community stakeholders to align the delivery of this program with other environmental and economic development activities.

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SIGNATURE



Dr. David McKeown
 Medical Officer of Health

ATTACHMENTS

Attachment 1: Draft Environmental Reporting and Disclosure Bylaw

Attachment 2: Environmental Reporting, Disclosure and Innovation: A Proposed Program for the City of Toronto (November 2008)

¹ Harrison, K. and W. Antweiler. Incentives for Pollution Abatement: Regulation, Regulatory Threats, and Non-Governmental Pressures. *Journal of Policy Analysis and Management*. 2003; 22:3. p.370.

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³ Peters, Michael and R.K. Turner. 2004. SME Environmental Attitudes and Participation in Local-scale Voluntary Initiatives: Some Practical Applications. *Journal of Environmental Planning and Management*. 47: 3. pp 449-473.

⁴ United Nations Economic and Social Council. 2001. Draft Analysis of Costs and Benefits of Pollutant Release and Transfer Registries.

⁵ Ontario Centre for Environmental Technology Advancement. 2005. Annual Report 2004-05.

<http://www.oceta.on.ca/TORSUS/documents/OCETAarwebPDF.pdf>

⁶ Abt Associates. 1997b. Benefit-Cost Analysis of the Massachusetts Toxics Use Reduction Act. Report to the Toxics Use Reduction Institute, UMass Lowell.