Access to Environmental Information: Environmental Reporting in Toronto
Gaps and Opportunities

May 2007

SUMMARY REPORT

Prepared for
Toronto Public Health

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Lura CONSULTING
COLLABORATIVE PROCESSES
COMMUNICATION & EDUCATION
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May 31, 2007

Ms. Josephine Archbold, M.Sc.
Research Consultant
Toronto Public Health
Environmental Protection Office
277 Victoria Street, 7th Floor
Toronto, Ontario M5B 1W2

Dear Ms. Archbold:

Re: Consultation and Technical Report on Access to Environmental Information

Pleased find attached the final report of the Access to Environmental Information: Environmental Reporting in Toronto, Gaps and Opportunities project that was completed on May 31, 2007.

It has been a pleasure working with you and your team, and we would be happy to assist you again on your future endeavours.

Regards,

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EXECUTIVE SUMMARY

In 2000, the City of Toronto's Environmental Task Force recommended the development of Right-to-Know legislation, which was subsequently incorporated into the City's Environmental Plan. Toronto's Board of Health considered public access to environmental information – also known as community right-to-know – in January 2005 and recommended that the Medical Officer of Health report on practical and effective strategies for Toronto. As part of this work, Toronto Public Health initiated a study to identify gaps and opportunities for enhancing access to environmental information. To assist with this work, they retained the consulting team of Lura Consulting, Marshall Macklin Monaghan, and Dr. Harvey Shear, University of Toronto.

The purpose of this study is to provide an overview of the gaps, opportunities, and challenges of reporting substances of concern and to identify how to make this information more accessible. The study consisted of three elements:

1) Estimating the quantity of substances of concern used, stored, released and transferred in Toronto, and identifying gaps in the environmental information available;
2) Consultation with internal and external stakeholders (including interviews, focus groups and workshops) to determine the challenges and opportunities of environmental reporting; and
3) A review of Access to Information programs in three other jurisdictions (New York City, Massachusetts and Oregon).

This report presents the consulting team's findings of the consulting team from these activities.

The review of substances of concern used, stored, released or transferred from Toronto's commercial and industrial sectors, and access to this information is presented in Section 3.0 of this report. It identifies several gaps in environmental reporting of substances of concern in Toronto. For example:

- While many of Toronto's operations report to various environmental reporting mechanisms (for example Toronto Sewer Use By-law); however; only the National Pollutant Release Inventory (NPRI) is readily accessible to the public.
- 3% of Toronto's industrial, commercial and public operations report to NPRI.
- 56% of releases to air, water and land are not reported to NPRI.
- 77% of releases to air are not reported to NPRI.
- No use and storage data are reported to NPRI.
- 99 to 100% of releases in Toronto are to air; with the exception of waste management sector which releases primarily to water.

The consultation identified a number of key messages from stakeholders:

- The community has a right to know about chemical emissions from facilities, but environmental information provided to the general public should be done so in context so that it can be properly understood.

- The City of Toronto should focus on addressing the current gaps in environmental information.
- Any new reporting initiative by the City of Toronto should avoid duplicating current reporting requirements.
- The economic costs and benefits to both the City and businesses must be considered.
- Enhanced access to environmental information can help protect both public health and the environment.

Various stakeholders identified a number of practical and feasible ways to address the observed information gaps. They included, for example:

- Promoting environmental reporting programs and their results;
- Disclosing the classes of substances of concern and their effects instead of the specific chemicals;
- Engaging small and medium-sized businesses, but also providing support and using models to calculate their emissions;
- Streamlining existing reporting programs;
- Engaging and collaborating closely with stakeholders;
- Collaborating with other municipalities and regions in the Greater Toronto Area;
- Providing environmental information in a context that is applicable to the audiences' needs;
- Varying the level of access to the information based on the users' needs; and
- Implementing a Community Right-to-Know By-law.

Based on the research and stakeholder discussions, the consulting team makes ten recommendations to Toronto Public Health for consideration as it moves forward to enhance environmental reporting:

1. Communicate the rationale for enhancing access to environmental information, including the purpose for collecting and making it accessible and the specific needs for the information.
2. Work in partnership with stakeholders to ensure the transparency of the process for enhancing access to information and to best meet the needs of the stakeholders.
3. Demonstrate leadership - report environmental information for municipal facilities and operations and make the information accessible.
4. Focus on stimulating pollution prevention and target priority substances of concern and sector gaps in reporting
5. Collaborate with other reporting programs and government agencies to identify opportunities for capturing under-reported sectors and substances of concern or for streamlining programs.
6. Ensure reporting programs are easily accessible and provide the information that is responsive to the audiences' needs.

7. Support enhanced access to information with education and awareness programs.
8. Implement approach in a way that minimizes administrative and reporting costs while stimulating benefits such as pollution prevention.
9. Implement the program strategically and in stages.
10. Ensure the program is equipped with the necessary technical expertise and support.

Note: The information and opinions expressed in this document are those of the authors, and do not necessarily reflect the opinion of Toronto Public Health or the City of Toronto. Unless specifically noted otherwise, the perspectives of stakeholders that are presented in this report should not be considered to be consensus opinions of other stakeholders.

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1 ENHANCING ACCESS TO ENVIRONMENTAL INFORMATION FOR THE CITY OF TORONTO

1.1 Introduction

In October 2006, Toronto Public Health (TPH) retained the consulting team of Lura Consulting, Marshall Macklin Monaghan and Dr. Harvey Shear from the University of Toronto to assist it with an analysis of the gaps and opportunities that will contribute to its ongoing policy development work on environmental reporting and Access to Environmental Information (AEI).

This report documents the results of the Toronto Public Health's (TPH) *Access to Environmental Information: Environmental Reporting in Toronto, Gaps and Opportunities* project, including the technical review and the stakeholder consultation.

This report is divided into four main sections. Section 1 provides background on the project, including TPH's mandate for this project and the scope of this assignment.

Section 2 describes the approach used for the technical review, the stakeholder consultation and the review of programs in other jurisdictions. The results of these components are presented and discussed in Section 3.

The study conclusions are presented in Section 4, including the major findings on emission estimates, information gaps and the key messages from stakeholders, summaries of the challenges and opportunities for moving ahead with enhancing AEI, key areas of agreement and disagreement, and recommendations on moving forward.

The appendices include the complete technical report and the reports for the consultation events.

1.2 Background

1.2.1 History

Access to Environmental Information in Toronto

In 2000, the City of Toronto's Environmental Task Force identified that a Right-to-Know (RTK) by-law should be developed for Toronto. The Task Force's RTK recommendation was incorporated into the council-endorsed Environmental Plan. In June 2006, Toronto's Board of Health considered the issue of environmental reporting and making this information more accessible. The TPH report *Access to Environmental Information: Preventing Pollution, Avoiding Risks* examined the current state of environmental data collection and public access to that information in Toronto. It drew from a review conducted for TPH by the Canadian Environmental Law Association (CELA 2006) and from preliminary discussions with the business community, environmental and health organizations, labour representatives, international experts and several City Divisions.

The Board of Health directed the Medical Officer of Health to consult with stakeholders in the business community, labour groups, environmental and health organizations and community groups to identify information needs, barriers and opportunities for enhanced

AEI. The Board of Health also endorsed principles to guide consideration of how to enhance access to environmental information in Toronto. The principles include the provision of consistent and timely information on toxic chemicals used, stored and released in Toronto, supporting environmentally-sustainable business practices and focusing on certain priority substances of concern. These principles were to guide upcoming consultation with stakeholders in the business community, labour groups, environmental and health organizations, community groups and City staff. In early 2007, the Medical Officer of Health will report to the Board of Health with the results of the consultation and potential next steps.

1.2.2 Scope of the Assignment

In October 2006, TPH retained the consulting team of Lura Consulting, Marshall Macklin Monaghan (MMM) and Dr. Harvey Shear from the University of Toronto, Mississauga Campus, to assist it with an analysis of the gaps and opportunities that will contribute to its ongoing policy development work on Environmental Reporting and AEI. Lura Consulting acted as lead consultant and conducted the stakeholder consultations. MMM conducted the technical review, which was peer reviewed by Dr. Harvey Shear.

The Lura team has extensive public consultation and stakeholder relations experience, facilitation capabilities and established communications skill and understanding. The MMM scientific team provided technical and scientific research and knowledge in the area of toxicology, environmental planning and documentation. Dr. Harvey Shear has pioneered environmental reporting processes, developed the first pollution prevention centre in Canada, and has worked in the prestigious role of scientific advisor for Environment Canada.

Project Goal

The goal of this project was to design and facilitate stakeholder consultations, conduct research and write a report that will contribute to TPH's understanding of the coverage, gaps and opportunities and challenges of accessible environmental reporting programs in Toronto.

TPH had identified a step-wise approach to further its mandate through stakeholder workshops, key informant interviews, and focus groups, TPH and its consulting team were to:

- Identify and confirm relevant substances of concern;
- Identify types of businesses/industries that store, use, emit, transfer these substances;
- Develop gross estimates of potential emissions;
- Review current environmental reporting processes for these sectors/substances;
- Identify reporting gaps in coverage (programs and substances) and provide explanations for reporting gaps;
- From lessons learned in Toronto and other communities, identify successes, what challenges have been experienced, and what are the opportunities around developing an environmental reporting approach for Toronto; and
- Document the findings of the consultation and scientific work programs in a comprehensive report.

2 APPROACH

2.1 Estimating Use, Storage, Releases and Transfers in Toronto

The scientific and technical review was conducted in an iterative approach, integrating the results of the stakeholder consultations. To establish a basis upon which to estimate the quantity of substances of concern used, stored, released and transferred in Toronto, the following steps were taken:

- A review of existing environmental reporting systems in Toronto to identify the types of data available and the types of companies reporting;
- The development of the list of substances to be estimated;
- The identification of the sectors and operations likely to contribute to these substances in Toronto;
- An estimation of the use, release and transfer of these substances in Toronto, based on reported emissions data, emissions data, and employment data; and
- Discussion with stakeholders.

A full description of the methodology, including calculations and results can be found in the technical review report provided in Appendix A.

2.2 Consultation Process

Toronto has a substantial community of knowledge in the area of environmental reporting. Stakeholders representing various sectors have participated with TPH over the past decade in informing its approach. This collaborative and consultative approach continued in this phase of work. The consultation was designed to provide TPH with insight into how reporting data and making information accessible could benefit the public and businesses and what level of environmental information should or could be made available to the public.

The following activities were carried out:

- Development of a contact data base;
- Key informant interviews with Toronto, national and international experts;
- One City staff stakeholder workshop (exploring knowledge and gaps);
- One external stakeholder workshops (exploring knowledge and gaps);
- One combined stakeholder workshop (with City staff and external stakeholders) to explore the results of the consultation and technical review and to identify elements for a successful “made-in-Toronto” approach; and
- Four sector specific focus groups.

A consolidated overview of the consultation results is provided in Section 3.2. Unless specifically noted otherwise, the perspectives of stakeholders that are presented in this report should not be considered to be consensus opinions of participants.

2.2.1 Key Informant Interviews

Interviews were held with eleven key informants on how reported environmental information is used, the benefits and weaknesses of reporting programs, and both the barriers and opportunities for the reporting and use of environmental information. The informants were those familiar with reporting programs and ranged from administrators of reporting programs, to representatives from environmental organizations and industry.

The report is provided in Appendix B.

2.2.2 Internal and External Stakeholder Workshops

Two workshops were held early in the consultation process to introduce stakeholders to the project. The first workshop took place on November 17, 2006 and involved staff members from the City of Toronto. The second workshop took place on November 22, 2006 and involved stakeholders from industry associations, community groups, environmental groups, health organizations and labour.

The purpose of each of the workshops was to:

- Provide an outline of TPH's current plans relating to its investigations around access to environmental information and environmental reporting;
- Consult with stakeholders and conduct a technical analysis that will contribute to TPH's understanding of the coverage, gaps, opportunities and challenges of accessible environmental reporting programs in Toronto;
- Discuss the Toronto Board of Health's recommended principles to guide the City's development of a strategy to make environmental information more accessible; and,
- Identify challenges, opportunities and next steps from the perspective of participants.

The format for the workshops consisted of a presentation on the purpose of the project and the approach to the consultation and the technical review, followed by a discussion with the participants on the participants' experience with environmental reporting and their perspectives on environmental reporting in Toronto.

The reports for the workshops are provided in Appendix C and D.

2.2.3 Focus Groups

Four focus groups were held with stakeholder groups in order to have detailed discussions with them about the gaps, challenges and other issues associated with environmental reporting and access to environmental information. Specifically, the purposes of the focus groups were to:

- Assist TPH in developing an understanding of the perceptions stakeholders have on how environmental reporting could encourage pollution prevention;
- Improve TPH's understanding of stakeholder perspectives on the role of environmental reporting in current business practices and local communities;

- Identify the benefits, costs, challenges and opportunities associated with Access to Information and Environmental Reporting; and
- Identify the implications to small and medium sized businesses, both in terms of reporting and in their environmental information being accessible.

The focus group sessions, which took place on December 12 and 13, 2006, were divided into four stakeholder sectors:

- Small to medium sized business and business associations;
- Residential and other citizen groups;
- Non-governmental organizations (such as environmental and health groups); and
- The Toronto Industry Network.

The focus groups were conducted in an informal roundtable setting, each lasting for approximately two hours, and were attended by between 6 to 9 participants.

The report for the workshops is provided in Appendix E.

2.2.4 Results and Steps Forward Workshop

On January 9, 2007, a stakeholder workshop was convened to present the results of the stakeholder consultation process to date, to present the results of the technical review, and to obtain feedback from participants on potential steps forward. The workshop format consisted of a presentation of the results, followed by a series of roundtable discussions. Roundtable reporters presented the results from their particular roundtable discussion in plenary sessions at the workshop's midpoint and closing.

The report for the workshop is provided in Appendix F.

2.3 Jurisdictional Review

A review of access to environmental information programs in other jurisdictions was conducted, which examined their successes and challenges. The three jurisdictions reviewed were:

- New York City's *Community Right-to-Know Program*
- Massachusetts' *Toxic Use Reduction Program*
- Oregon's' *Toxic Use & Waste Reduction Assistance Program*

To undertake the review, information was gathered from a range of sources. In December 2006, telephone interviews were conducted with the co-ordinators of each program. The interviewees were provided with a brief description of the TPH project and asked to share their experiences in regards to their programs' challenges, opportunities and gaps. In addition, the review looked as available annual reports and/or program reviews, as well as all accessible program documentation (involving legislation, program guides, forms and electronic information).

A summary of the review is provided in section 3.3. The report is provided in Appendix G.

3 RESULTS AND DISCUSSION

This section presents an overview of the results of the technical review and the stakeholder consultation. The full reports are presented in Appendices A to G.

3.1 Technical Review

Based on the review of existing reporting systems and estimated quantities of the release of substances of concern, it is concluded that:

- While many of Toronto's operations report to various environmental reporting mechanisms (for example Toronto Sewer Use By-law); however; only the National Pollutant Release Inventory (NPRI) is readily accessible to the public.
- 3% of Toronto's industrial, commercial and public operations report to NPRI.
- 56% of releases to air, water and land are not reported to NPRI.
- 77% of releases to air are not reported to NPRI.
- No use and storage data are reported to NPRI.
- 99 to 100% of releases in Toronto are to air; with the exception of waste management sector which releases primarily to water.
- About 88,600 tonnes/year of substances are released in Toronto.
- About 75,400 tonnes/year of substances are transferred in Toronto.
- About 70% of the estimated releases are Criteria Air Contaminants, (i.e., volatile organic compounds (VOCs), nitrogen oxides, carbon monoxide and particulate matter) which contribute to poor air quality (i.e., smog).
- A limited number of substances (sulfuric acid, mercury, zinc, phosphorus, copper, aluminum, ammonia, toluene, xylene, manganese and chromium) make up about 95% of reported transfers.
- *Toronto's Ten Key Carcinogens* are reported to be released and transferred in much lower quantities than other substances, typically contributing to less than 1% of the reported quantities.
- VOCs that are not contributors to smog as identified by NPRI (e.g., dichloromethane, ethylbenzene, trichloroethylene, tetrachloroethylene, etc.) contribute less than 1% to the reported and estimated total releases.
- Small operations such as automotive repair shops, dry cleaners and funeral services do not typically report through NPRI. They contribute less than 1% to the estimated total releases in Toronto.
- There are limited data for the storage of substances of concern in Toronto as reported through the Environmental Emergencies Planning Registry.
- Reporting systems other than NPRI are not easily accessible to the public and the environmental information is not compiled for interpretation.
- The CMA 2005 Industry Profiles and NPRI data were used to identify 18 sectors with the potential for the use, storage, release and transfer of substances of concern. The

selected sectors represent approximately 40% of the Toronto workforce, and essentially 100% of the workforce in the goods producing sectors.

Based on the conclusions and the identified gaps in information outlined above, estimates and public health impacts could be improved by:

- The use and storage of substances of concern could be quantified for selected sectors such as general manufacturing and chemical distribution. A review of hazardous waste management data may assist in the identification of operations with the potential for storage of substances of concern; however, the publicly available information does not provide quantities of waste generated. A more detailed review of the TURA data for releases of substances of concern in these sectors could also be conducted to assess variability in the quantities used and released, within a single regulatory regime.
- The local effects of small operations that use and release substances of concern could be assessed to evaluate whether their relatively small contribution to total releases is significant at a local scale.
- The contribution of laboratories could not be quantified in this study. Although relatively small quantities of substances of concern are likely associated with these operations, the potential for very toxic substances to be present may warrant a more detailed review of these facilities.
- The release estimates may be assessed for relevance to public health by comparing the toxic equivalence of the various substances reported through NPRI. This will allow the ranking of the chemical emissions by importance to public health.
- The release estimates may be compared to air quality data to provide context to the contribution of releases from the identified sectors on concentrations of these substances in Toronto air. The air quality data may also be compared to health benchmarks considered to be safe for public health to provide an indication of areas of concern related to releases of substances of concern.

3.2 Stakeholder Perspectives

This section consolidates the feedback received from the stakeholder activities. Sections 3.2.1 to 3.2.5 include key themes from the consultation, the reported benefits and challenges of enhanced access to environmental information, a summary of the feedback received on regulatory and voluntary approaches to reporting, and a summary of considerations for the future.

Reports on the consultation activities are found in Appendices B to F.

3.2.1 Key Themes

Throughout the consultation, there were a number of key themes heard from various stakeholders that participated in this process. These are described here. They do not necessarily represent consensus positions from stakeholders, but are primary themes of the comments raised.

- *Environmental information provided to the general public should be done so in context so that it can be properly understood.*

A key concern among many stakeholders is the lack of context surrounding information from current reporting programs. It was generally agreed that the technical data needs interpretation for the general public so that they can understand it and are able to respond to it appropriately. The industry-run program Responsible Care was identified as an example that attempts to provide context by encouraging dialogue between member companies and their communities. Another example was the work of the environmental group Toronto Environmental Alliance, which used the NPRI data to generate a map showing where reported releases were occurring in the City.

- *The City of Toronto should focus on addressing the current gaps in environmental information.*

It was noted by the stakeholders that any new Toronto program or enhancements to other reporting systems (such as NPRI, etc) should address current gaps in reporting and include small businesses and under-reported sectors. TPH was also cautioned that smaller businesses would likely need additional support, and expanding program thresholds to include them would require additional resources

- *Any new reporting initiative by the City of Toronto should avoid duplicating current reporting requirements.*

Additional reporting burdens and the duplication of information already being reported were significant concerns among the business community. Businesses were found to report under a number of programs, such as Certificates of Approval, NPRI, Ontario Regulation 127 and emergency response regulations. The impact of reporting systems on businesses often depends on the size and nature of the business.

- *The economic costs and benefits to both the City and businesses must be considered.*

Environmental reporting systems can motivate businesses to engage in pollution prevention activities, which have financial and environmental benefits. At the same time, a new or expanded reporting system in Toronto would have cost implications for both the City and for the businesses required to report. It was noted that many small businesses would require support to handle the additional resource burden required by monitoring and reporting. Depending on the chosen approach, a new or expanded system would also have administrative cost burdens for the regulating body, in terms of administering the program, managing the data, and providing outreach and assistance to businesses, among other things.

- *Enhanced access to environmental information can help protect both public health and the environment.*

The protection of public health was noted as a key motivator for improving access to environmental information. It was felt that improving access would help to protect public health in a variety of ways, including:

- More information about chemical emissions can inform public health priorities, assist research on the links between pollutants and human health, and better understand pollutant pathways;
- The requirement to track and report chemicals data, along with information on environmental best practices, could encourage industry to pursue pollution prevention activities;
- The general public would be able to better understand the risks near them from substances of concern and their exposure to pollutants, and be able to react accordingly to protect themselves;
- Improved awareness in the workplace would help to protect the health of workers by contributing to the improved handling of chemicals, the substitution of chemicals in the production process, and by providing workers with improved knowledge on how to avoid or protect themselves from these substances in the workplace.

3.2.2 Benefits of Enhanced Access to Environmental Information

The stakeholders described a number of different benefits for enhanced environmental reporting. Some key themes are presented below and summarized as five key points.

- *It encourages pollution prevention and improves overall environmental performance.*

Enhanced access to information could help businesses, levels of government, and non-government organizations (NGOs) work towards their environmental goals by helping them establish performance baselines, set targets, and monitor and improve environmental performance. Companies and organizations tracking their chemical inventories and emissions would be more informed about their process and be better able to identify improvements.

Availability of the information can also encourage positive change by creating market pressures and by helping industry and organizations respond to them. For instance, the information can be used to help inform consumers who include environmental considerations in their purchasing decisions. Businesses and industries can respond to this by improving their environmental performance and demonstrate it using the reported information.

- *It helps to protect public and workplace health.*

Enhanced access to information was thought to help protect human health by allowing residents to make informed decisions about where they want to work and live, and to know if those areas are near toxic substances of concern. Also, environmental information could help to identify potential health hazards in communities, such as those due to release of pollutants from businesses or during accidents such as spills or fires.

Employees in the workforce would also be better protected. Companies that closely track chemicals would be more able to substitute less toxic chemicals where possible and could ensure the appropriate handling procedures are in place.

- *It promotes education and awareness around environmental and related public health issues.*

The information available through reporting programs can be used to help educate and inform the public on toxic substances in their communities and on the progress that is being made in environmental protection. Environmental, health and other community groups can also use this information in advocacy for environmental and public health issues.

Access to environmental information provides the public with the opportunity to make better-informed life decisions. This can be improved upon through positive and constructive dialogue between businesses and the community, which could help the public better understand what toxic substances are being used and emitted from nearby sites and what pollution prevention and chemical control procedures are in place.

Through this type of dialogue and reporting programs, businesses can demonstrate that they are good corporate citizens and are responsive to the needs of their customers. This can help to avoid public hysteria or uncertainty in the case of an event, such as a spill or fire.

- *It can improve the economic performance of businesses and industries.*

Businesses are able to improve inventory control and reduce stockpiles through close monitoring of toxic substances used and stored. This also makes it easier to investigate more environmentally-friendly raw material substitutions. This could help to protect the health of the workforce and improve employee morale.

Environmental reporting was also thought to help encourage green sustainable business in Toronto and to ensure that Toronto maintains its manufacturing base, as communities continue to demand better environmental performance from local companies.

- *It assists with government planning and helps to inform policy decisions.*

The data can be used by all levels of government to analyse environmental performance within jurisdictions and among industry sectors, particularly when it is used in conjunction with web-mapping software. This can help to measure compliance with international or other transboundary agreements.

The data can also be used to identify trends and to show where more effort is required, where policy and regulations need to be updated, or demonstrate the progress of programs to the public. Also, local planners can use the data to help with their municipal and emergency preparedness planning.

3.2.3 Challenges of Enhanced Access to Environmental Information

The key challenges of an enhanced reporting program are presented below.

- *The available environmental information can be difficult to understand.*

Stakeholders generally agreed that the environmental information that is available is difficult to understand. Businesses were concerned about the potential consequences of

releasing raw data without context, which could result in undue panic or concern. It was also noted that the raw data may not allow audiences to differentiate between the release of a substance and the potential human health hazard.

This point of view was reflected in the opinions of the public and NGO stakeholders. They want the information provided with context showing them what the threats are, what is being done to minimize them, and what should be done in case of emergency.

- *The environmental data collected should be accurate and timely.*

Concern was raised over the accuracy and timeliness of the information found in reporting programs. It was felt that the reported data should be checked for accuracy and verified, and that it should be posted in a timely fashion, so that the information posted is as current and up-to-date as possible.

- *The information collected should be useful and meet a defined need.*

It was felt that the information collected must meet defined needs and is being collected to address a real problem, issue or demand. This need should be demonstrated in the program's rationale.

- *There should be a level playing field and the reporting system must be fair.*

Many industry stakeholders felt that the burden of reporting must be fairly distributed. For example, reporting should not be focused on specific sectors or just on large businesses.

Also, any made-in-Toronto approach should not negatively impact the competitiveness of Toronto business, either regionally or globally. For example, the added burden of a reporting requirement could harm a business' ability to compete with a company outside of the Toronto area, who would not have the added expense of monitoring and reporting.

Additionally, the public image of an environmentally-responsible organization could experience long-term harm if one-time or minor environmental infractions are made publicly available.

- *Duplication with existing reporting programs should be avoided.*

As stated earlier, many businesses already report to a number of environmental reporting programs. A made-in-Toronto approach should avoid overlap with these programs.

- *Proprietary information should be protected.*

It was felt that providing information on the chemicals a business stores and uses would release proprietary information and give its competitors an unfair advantage, especially if the use of a new chemical can be correlated with the release of a new or improved product.

- *Small to medium-sized enterprises are a priority area, but they would need support if required to report.*

It was widely noted that small to medium-sized enterprises (SMEs) are a current reporting gap that should be addressed in an enhanced reporting program. However, many SMEs would not have either the technical, human or financial resources to carry out the required monitoring or reporting. Many stakeholders felt that if SMEs were to participate in a reporting program then they would need considerable support, such as technical support and access to consultants, among other things.

- *The administrative costs of an enhanced reporting program could be considerable.*

The City should consider ways to minimize administrative costs of an enhanced reporting program, and to ensure sufficient resources exist for any new program. Depending on the approach being considered, for example, lowering reporting thresholds or expanding the program to include smaller businesses could result in a disproportionately large increase in the amount of companies reporting and the amount of data received. The added costs could include administering the database, providing support to businesses newly reporting, and promoting the program.

- *There may be a conflict between enhancing the public's access to information and protecting public security.*

Concern was raised over the threat of criminal elements of society (e.g., terrorists, vandals or thieves) having access to information on where certain toxic substances are stored and in what quantities. Some stakeholders felt that the availability of such information could lead to theft of the materials for criminal uses (e.g., public harm or terrorism) or the destruction of private property, which could be potentially harmful to public health.

It was noted that businesses have been told by the RCMP and by CSIS not to disclose information about some materials they have on site and where it is stored. Some stakeholders commented that access to information could enhance security, as it could motivate companies to reduce their use or storage of potentially hazardous chemicals.

- *The City could potentially be held liable for negative consequences of providing environmental information or its misuse.*

There was a concern that the City could be held liable for any negative unintended consequences resulting from the posting of environmental information. Questions regarding liability issues focused on inaccuracies in the data, negative impacts on land values (e.g., if a property turns out to be near an abandoned landfill), or criminal or malicious use of the data.

3.2.4 Voluntary and Regulatory Approaches

The key informants and stakeholders were asked for their perspectives on the merits of regulatory and voluntary programs. In general, regulatory approaches were said to be more reliable than voluntary approaches, as they provide more consistent data, can help to ensure a level playing field, and are better at encouraging the participation of desired

parties. However, it was noted that voluntary approaches are useful when starting up or testing a new program.

Some stakeholders stressed that consultation and cooperation among all stakeholders is key to ensure that the program is efficient and effective.

3.2.5 Opportunities for Future Work

Stakeholders were invited to suggest possible ways that the City could proceed with enhancing access to environmental information. Along with identifying challenges or benefits, many stakeholders offered suggestions to guide Toronto Public Health as it moves forward. Their suggestions include:

- *Promote the existence of environmental reporting programs and their results.*

Some stakeholders suggested that the existing environmental reporting programs should be more heavily promoted – for example, promoting that these programs exist, what the obligations for reporting are, and how the information can be accessed and used by the public.

It was felt that the information contained in reporting programs could be used in environmental education. For example, the information could be used to track environmental trends (across Toronto and on a local scale) and highlight local business leaders.

In promoting the programs, the City could also demonstrate leadership by promoting what it is reporting and how it is using the information in its pollution prevention practices.

Suggested educational tools included fact sheets, websites, a business index. pollution prevention best practices, and training sessions for industry or emergency responders. It was noted that NGOs and other community groups (e.g. Toronto Environmental Alliance, Clean Air Partnership) could play a role in disseminating information.

- *Focus on priority substances and reporting gaps.*

A new reporting program should ideally focus on priority substances and gaps in reporting. Priority substances should be ones that are a significant threat to public health or are under-reported (and may therefore represent a potential public health threat, but which must be assessed through data collection). In the technical review, the main under-reported toxic substances were found to be Volatile Organic Compounds (VOCs), nitrogen oxides, nitrate ion, carbon monoxide, ammonia and particulate matter[1]. Nearly all sectors were found to have considerable gaps in reporting. Information on storage and use of toxic substances was also found to be a considerable reporting gap. A set of criteria could be developed to determine which substances of concern should be considered to be included in TPH's program at the early stages.

[1] Note: Under-reporting is based on quantities alone, and does not consider the toxicity of the chemical.

- *Disclose the classes of substances and their effects instead of the specific chemicals.*

To help address the concerns related to public security and proprietary information, it was suggested that information on storage and use of chemicals be limited to the class of chemical and its potential health and environmental effects rather than the name of the chemical itself. Some stakeholders felt that this would provide community members with the information they need while at the same time limit the amount of information available to business competitors and criminal elements.

- *Engage Small and Medium Sized Enterprises (SMEs), but also provide support and use modelling to calculate their emissions.*

It was widely acknowledged that the SME sector is greatly under-reported and should be engaged, particularly those in close proximity to residents.

It was suggested that an enhanced reporting program that included SMEs should also provide them with various types of support, including technical support (as they likely would not have the technical expertise in-house), incentives, information on best practices and pollution prevention, and other forms of education and tools.

Sector or industry-specific modelling could also be used to help generate estimates of emissions from SMEs without burdening them with expensive monitoring equipment. The models could be developed in consultation with relevant industry and business sectors and could incorporate information that is easy for SMEs to access, for example number of employees or type of equipment used.

- *Existing reporting programs should be streamlined and use "one-portal" access.*

It was noted that many businesses currently report to several different programs and agencies, and much information is being held but in different areas of government. It was generally agreed that government bodies requiring environmental information need to address their obstacles to working together and streamline their reporting programs, preferably through one web-based interface, or portal. Relevant industry sectors and associations should be consulted to identify opportunities for improvement, such as how to modify submission forms or other improvements.

- *Implement any new reporting program in stages.*

It was noted that a broad-scale reporting program would be a large undertaking that would be difficult to implement and manage properly. It was suggested that any new made-in-Toronto approach to enhancing AEI should be implemented in stages, possibly by focusing on a small number (5 – 10) of key toxic substances of concern or on specific sectors.

As a part of a phased-in implementation, it was suggested that it should start with a voluntary approach and then move toward mandatory reporting.

It was also suggested that pilot programs also be conducted to help research and test out methodologies and approaches for reporting and accessing the information.

- *Engage and collaborate closely with stakeholders.*

It was clear that any new or expansion of reporting programs should be designed and implemented in close consultation with stakeholders, particularly industry and SMEs, to better address their needs and to help form an efficient working collaboration.

- *Collaborate with other municipalities and regions in the Greater Toronto Area.*

Some stakeholders expressed concern that a new or enhanced reporting program covering just Toronto could harm the City's ability to retain and attract business and could encourage businesses to locate outside of Toronto. It was suggested that any enhanced program should be developed in collaboration with the Greater Toronto Area municipalities.

- *Make accessing environmental information easier and user-friendly.*

There was consensus among stakeholders that accessing environmental information is currently problematic, and that accessing information should be made much easier. For example, it was noted that obtaining useful information through the Certificates of Approval (Cs of A) is prohibitively difficult. It was suggested that there be clear communication tools available for accessing the data, such as a website that provides context for the information and user-friendly search functions. It was also suggested that the different reporting programs be searchable through one interface.

- *Provide environmental information in a context that is applicable to the audiences' needs.*

It was commonly held that the environmental information needs to be put in context when released to the public. For example, the information should include if the substances are harmful in the quantities present, what the potential impacts may be, and where the substances are located. Other desired information includes baseline information and the progress being made toward reducing hazards. It was also suggested that the information be integrated into a map-based format.

Some stakeholders felt that the general public is not able to understand what the environmental data means without some technical interpretation. Releasing the information without context could unintentionally panic the public.

- *Vary the level of access to the information based on the users' needs.*

It was recognized that different audiences will have different uses for and ability to understand environmental information. For example, it was felt that the City of Toronto would be a major audience and would need complete access. The City could use the information to help assess the impact of emissions on human and ecological health and to help inform its policy decisions. Similarly it was felt that other levels of government, especially relevant agencies like departments of environment and labour, should also have complete access.

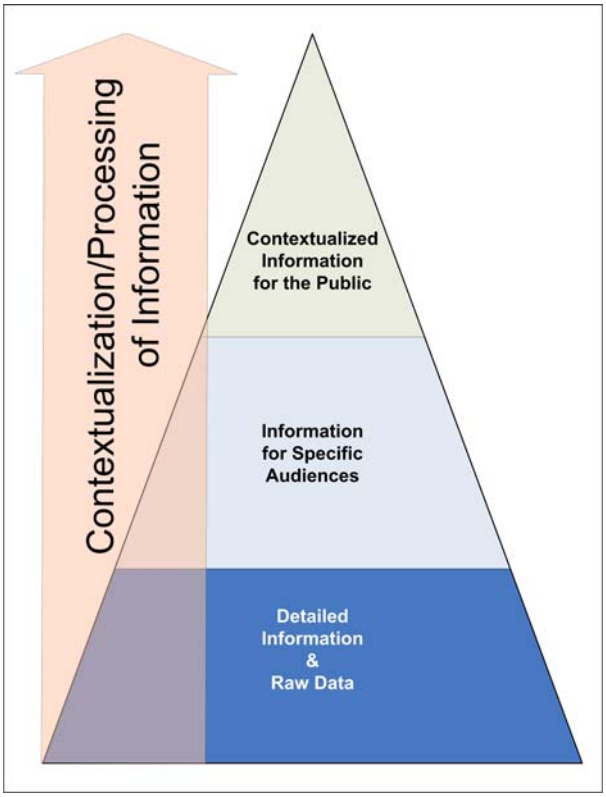
Those involved with emergency preparedness were also identified as a potential audience. It was felt that they would need up-to-date information on what materials are present on sites and what the potential risk exposures and affects would be.

The general public was identified as another audience, but one who would need the information contextualized and screened for security and proprietary reasons. It was thought that they would need information on the types of pollutants being released, from where, and their potential health and environmental impacts. Environmental, health and research groups may desire detailed information for conducting their own analysis.

Businesses and operations were also thought to be an audience, and they could use the information to help them improve the environmental performance of their organizations.

Figure 1 illustrates how access to environmental information might be organized. The raw environmental data collected is represented by the base of the triangle. As you move up through the triangle, the information increasingly undergoes contextualization or processing and is turned into knowledge. The middle of the triangle represents information that is not generally accessible except on request or to specific groups. The top of the triangle represents information that has been contextualized for release to the general public.

Figure 1: How different audiences use environmental information



- *Implement a Community Right-to-Know By-law.*

Some stakeholders felt that a Community Right-to-Know (RTK) by-law, rather than a voluntary reporting program, should be implemented. It was felt that a by-law would be the only way to ensure full participation in environmental reporting and in pollution prevention. A by-law was also noted to be one method for ensuring a level playing field across sectors.

It was also noted that Toronto's Sewer-Use By-law requires some companies to prepare pollution prevention plans, and that this scope could be expanded to include more companies.

3.3 Lessons from other Communities

As a component of investigating the issues of enhancing access to environmental information for the City of Toronto, the successes and challenges of environmental reporting programs in other jurisdictions were analysed.

The programs reviewed included:

- New York City's *Community Right-to-Know Program*
- Massachusetts' *Toxic Use Reduction Program*
- Oregon's' *Toxic Use & Waste Reduction Assistance Program*

3.3.1 Program Summaries

Massachusetts and Oregon have structured their programs for pollution prevention. The list of toxic substances regulated comes from U.S. federal requirements (Toxics Release Inventory or TRI), and companies that use the chemicals at or above certain thresholds must submit annual use reports and develop use reduction plans. The implementation of the reduction plan is mandatory in Oregon. Both programs provide companies with free, confidential technical assistance. Information about the programs is available through on-line reports, although the Oregon program keeps specific company information confidential.

Massachusetts and Oregon have been successful in reducing pollution. For example, in less than two years, Oregon reduced or eliminated 82,341 lbs. of toxic chemicals and hazardous waste.

New York City has structured their program for risk reduction rather than pollution prevention. While the substances regulated are the same as those on the TRI, all companies that use the substances, regardless of amount, must submit annual use reports and risk reduction plans (as opposed to use reduction or pollution prevention plans). Access to information is available to Emergency Response personnel, or by written request.

A more detailed description of these programs is included in Appendix G (Jurisdictional Review Report).

3.3.2 Key Factors for Success

The review highlighted success factors for the programs, and are grouped here under two categories: program administration and program goals and objectives. Key success factors included:

<u>Program Administration</u>

- Having the proper expertise on staff (including adequate technical expertise);
- Having an electronically savvy program;
- Providing support mechanisms to industry, such as mechanisms to provide technical assistance and to help with program compliance;

<u>Program Goals and Objectives</u>

- Creating a partnership between government and industry;
- Focusing upon assistance over monitoring and enforcement;
- Providing flexibility in meeting program requirements (e.g. through an Environmental Management System); and
- Basing the program design upon program goals and objectives.

The review also highlighted challenges to implementation which echo some perspectives of the stakeholder consultations. For example, making information accessible electronically, working with industry, prioritizing which chemicals will be reported and ensuring adequate resources for short and long-term implementation were key challenges to address.

3.3.3 Lessons for Toronto

Through the jurisdictional review, a number of key lessons for Toronto were observed. These include:

- Any new reporting programs should have clear and defensible goals and objectives.
- Consult closely with all stakeholders, in particular industry and the small business sector, to better address their needs and challenges, and to help obtain stakeholder buy-in.
- Ensure that the proper technical expertise is available during the development, implementation and operation of any new reporting program.
- Access to reporting forms and environmental information should be simple and online.
- Consider available resources when setting program goals and objectives, including targeted toxic substances.
- Support any new reporting programs with education and other assistance, working in partnership with stakeholders to ensure that the necessary assistance is prepared and delivered.

4 RECOMMENDATIONS

The consulting team recommends that Toronto Public Health consider the following in its future work to enhance access to environmental information.

1. Communicate a clear rationale for enhancing access to environmental information, including the purpose for collecting and making data accessible, the specific needs for the information, and clear goals.

    - The purpose for enhancing access to environmental should be clear.

    - The information collected should be useful and be based on defined needs.

2. Work in partnership with stakeholders to ensure the transparency of process for enhancing access to environmental information and to best address the needs of the stakeholders.

    - All stakeholders, particularly industry and the SME sectors, should be consulted in order to ensure that their needs and challenges are addressed and to obtain stakeholder buy-in. The City may wish to consider establishing a multi-sector, community-based advisory group to assist develop the program as it moves forward.

    - Industry and SME sectors could provide modelling information that could fill information gaps on estimated toxic substance use, storage, release and transfer.

3. Demonstrate leadership - report environmental information for municipal facilities and operations and make the information accessible.

4. Focus on priority substances of concern and sector gaps in reporting. Further, consider the recommendations from the technical review, which include:

    - The use and storage of substances of concern could be quantified for selected sectors such as chemical manufacturing and chemical distribution. A review of hazardous waste management data may assist in the identification of operations with the potential for storage of substances of concern; however, the publicly available information does not provide quantities of waste generated. A more detailed review of the TURA data for releases of substances of concern in these sectors could also be conducted to assess variability in the quantities used and released, within a single regulatory regime.

    - The local effects of small operations that use and release substances of concern could be assessed to evaluate whether their relatively small contribution to total releases is significant at a local scale.

    - The contribution of laboratories could not be quantified in this study. Although relatively small quantities of substances of concern are likely

associated with these operations, the potential for very toxic substances to be present may warrant a more detailed review of these facilities.

- The release estimates may be assessed for relevance to public health by comparing the toxic equivalence of the various substances reported through NPRI. This will allow the ranking of the chemical emissions by importance to public health.

- The release estimates may be compared to air quality data to provide context to the contribution of releases from the identified sectors on concentrations of these substances in Toronto air. The air quality data may also be compared to health benchmarks considered to be safe for public health to provide an indication of areas of concern related to releases of substances of concern.

5. Collaborate with other reporting programs and government agencies to identify opportunities for capturing under-reported sectors and toxic substances or for streamlining programs.

    - Reporting programs should be available online and through one internet portal.

    - Many businesses, particularly larger industries, currently report to several different reporting programs and do not want duplicative reporting.

    - Identify opportunities for cooperation between government agencies for sharing and using environmental information.

6. Ensure reporting programs are easily accessible and provide the information that is responsive to the audiences' needs.

7. Support enhanced access to information with education and awareness programs.

    - Assist small businesses with support on reporting requirements and on improving their environmental performance (e.g., best practices).

    - Promote environmental reporting programs, including the reporting requirements, how environmental information can be used, and program results.

8. Consider opportunities to minimize costs while supporting benefits such as pollution prevention capacity.

9. Implement the program strategically and in stages.

10. Ensure the program is equipped with the necessary technical expertise and support.

    - The proper technical expertise should be available during the development, implementation, and operation of any new reporting program.

    - Use incentives to encourage participation in reporting and pollution prevention.

APPENDIX A: TECHNICAL REPORT

APPENDIX B: KEY INFORMANT INTERVIEWS REPORT

APPENDIX C: INTERNAL STAKEHOLDER SESSION REPORT

APPENDIX D: EXTERNAL STAKEHOLDER SESSION REPORT

APPENDIX E: STAKEHOLDER FOCUS GROUPS REPORT

APPENDIX F: RESULTS AND STEPS FORWARD WORKSHOP REPORT

APPENDIX G: JURISDICTIONAL REVIEW REPORT