

Creating Ontario's Toxics Reduction Strategy

**Consultation Session
Toronto - September 15, 2008**

Protecting the environment



1

Overview of the proposed Toxics Reduction Strategy

Toronto - September 15, 2008

Protecting the environment



2

Context

- What are the Government of Ontario's commitments related to toxics?
 - New toxics reduction legislation to reduce pollution and inform and protect Ontarians from toxic chemicals in the air, water, land, and consumer products;
 - Work with Cancer Care Ontario, Ontario Medical Association
- Toxics Reduction Scientific Expert Panel
 - Appointed Spring 2008; providing advice on priority toxics

Why is a new Toxics Reduction Strategy needed?

- Considerable strides by industry leaders in pollution prevention
- Current regulations and programs focus on emissions
- Further action required given:
 - Ontario 36% total Canadian discharges of substances under the National Pollutant Release Inventory to air and 50% to water; and
 - Ontario #2 in release of developmental and reproductive toxicants and #4 for known and suspected carcinogens in North America.
 - Increasing public concern
- Economic opportunity can be realized through innovative approaches
 - Reducing toxics can better position province to compete in an evolving international trade environment

Why is a new Toxics Reduction Strategy needed?

- Existing programs primarily manage emissions and waste - do not regulate the use of toxic chemicals
- Pollution prevention planning largely voluntary and on a case-by-case basis
- Promotion of safer alternatives could be enhanced

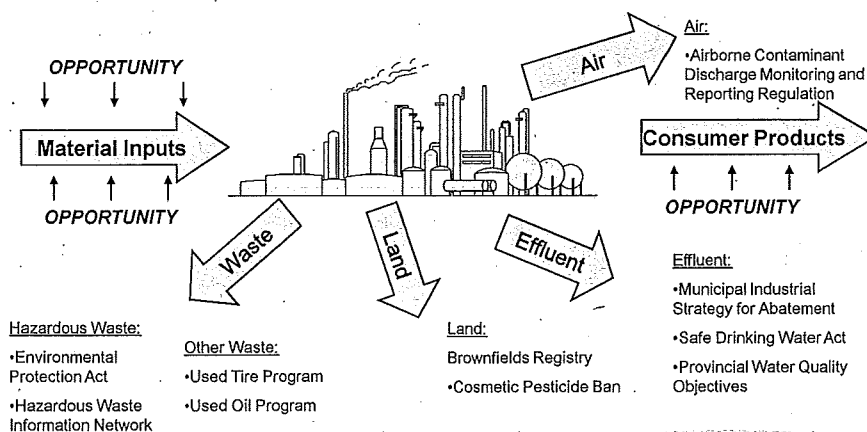
Ministry of the Environment



6

New Focus

- What is the focus of the new strategy?
 - Current focus on **outputs** - new focus on reducing toxic **inputs**



Ministry of the Environment



6

Related Ministry Initiatives

- What is the relationship between the proposed strategy and related Ministry initiatives?
 - The Ministry is also moving forward on existing programs such as:
 - Amendments to the Brownfields regulation
 - Continuing to update/set new air standards
 - Continuing to update/set new drinking water standards and provincial water quality objectives
 - These programs intersect with and support the goals of the strategy

Environment and Climate Change



7

Objective and Goals

- What is the objective of the proposed strategy?
 - To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products
- What are the goals of the proposed strategy?
 1. Reduce toxics, including carcinogens, associated with risks to human health and the environment
 2. Provide Ontarians with the necessary knowledge to make informed choices
 3. Foster a “greening” of Ontario’s economy

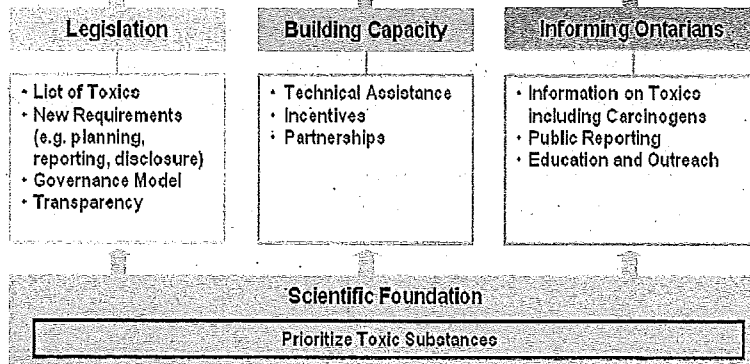
Environment and Climate Change



8

What are the key elements of the proposed strategy?

OBJECTIVE: To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.



Scientific Foundation

- How is the new Toxics Reduction Strategy supported by a strong scientific foundation?
 - Ministry experts and Expert Panel developed a proposed list of designated substances, including priorities for early action
 - Draft list based on review of science
 - Proposal is for a living list with regular updates
 - Leveraging existing science and addressing gaps in science occurring on an ongoing basis

Guiding Principles

- What principles would guide the implementation of the proposed strategy?
 - Build on rather than replace existing regulatory approaches
 - Coordinate with federal and municipal governments
 - Build on the foundation of the National Pollutant Release Inventory
 - Harmonize requirements
 - Share information where possible
 - Take into consideration pollution prevention planning efforts of industry already underway

How is the strategy designed to achieve its goals?

Begin with high priorities	➔	Adopt a phased approach beginning with high priority toxics whose identification is grounded in science
Place requirements on facilities	➔	To undertake material accounting, toxics reduction planning, reporting and public disclosure
Build capacity	➔	Technical assistance for facilities, economic and other incentives
Inform Ontarians	➔	Develop toxics reporting system and web-based information for Ontarians
Engage external parties	➔	External parties assist in implementation
Go beyond emissions	➔	New authorities to regulate toxic substances in products

Toxics

- What are “toxics” in the context of the proposed strategy?
 - In general, any substance and/or chemical that has the potential to cause adverse effects on human health and the environment
 - Under the proposed strategy, any substance and/or chemical included on the “Designated List”

Pillar 1 - Legislation

OBJECTIVE: To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.

Legislation

- List of Toxics
- New Requirements (e.g. planning, reporting, disclosure)
- Governance Model
- Transparency

Pillar 1

Proposed Legislation - Facilities

- To what facilities would the proposed new requirements apply?
 - Manufacturing sector and mineral processing within the mining sector
 - Facilities using, producing or emitting substances on a designated list of substances developed by the Ministry based on science
 - Facilities that meet the NPRI thresholds
 - Over 10,000 kg annually of a designated substance unless alternative threshold applies
 - Employ 10 employees or more

Pillar 1

Proposed Legislation - Facilities

- Why are new legal requirements proposed for facilities?
 - Increase knowledge of use, production and emissions of toxics in Ontario
 - Proposed new requirements for facilities to conduct materials accounting
 - Increase emphasis on pollution prevention in Ontario
 - Proposed new requirements for facilities to prepare toxics reduction plans
 - Mandatory planning, implementation voluntary
 - Increase information available to Ontarians about toxics in their communities
 - Proposed new requirements to publicly share information on materials accounting and toxics reduction plans

Pillar 1 Proposed Legislation – Consumer Products and Governance

- What new legal requirements are proposed beyond those related to facilities?
 - Proposed new requirements regarding consumer products containing toxic substances
 - Enable an external body to assist in implementation

Protecting our environment



17

Pillar 2 – Building Capacity

OBJECTIVE: To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.

Building Capacity

- Technical Assistance
- Incentives
- Partnerships

Protecting our environment



18

Pillar 2 - Building Capacity

- Why is building capacity important?
 - Facilities may need technical assistance and other support and incentives to meet new requirements and reduce toxics
 - Need to stimulate development, commercialization and application of alternatives to toxics
 - Need to build the body of professional and technical expertise to support the strategy's implementation
- Proposed strategy includes consideration of technical assistance, economic and other incentives, new partnerships to advance availability and application of alternatives

Pillar 3 – Informing Ontarians

OBJECTIVE: To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.

Informing Ontarians

- Information on Toxics including Carcinogens
- Public Reporting
- Education and Outreach

CRTH

Pillar 3- Informing Ontarians

- Why is providing information to Ontarians about toxics important?
 - Ontarians and communities want information about toxics in their communities
 - Ontarians want information about toxics in consumer products so that they can make informed choices
- Proposed strategy includes consideration of a toxics reporting system, as well as working with partners on education and outreach

Protecting the environment



Value of the proposed Strategy

- How does the proposed strategy go beyond current toxics management initiatives?

Current initiatives focus on reducing emissions



TRS – focus on reducing use and emissions

NPRI - reporting on emissions



TRS - reporting on use, production and emissions

CEPA - P2 planning for selected sectors & substances



TRS - planning for all relevant sectors & substances

CEPA - does not require public disclosure of plans



TRS - opportunity to publicly report pollution prevention progress

Protecting the environment



Next Steps

- What opportunities are available to comment on the proposed strategy?
 - Completion of the workbooks today
 - Completion of the more detailed survey either today or online by October 11
 - Submission of comments through the Environmental Registry until October 11
 - Further opportunities as draft legislation is considered by Parliament and as regulations are drafted

Protecting our environment

Ontario

23

Scope and Timing

Protecting our environment

Ontario

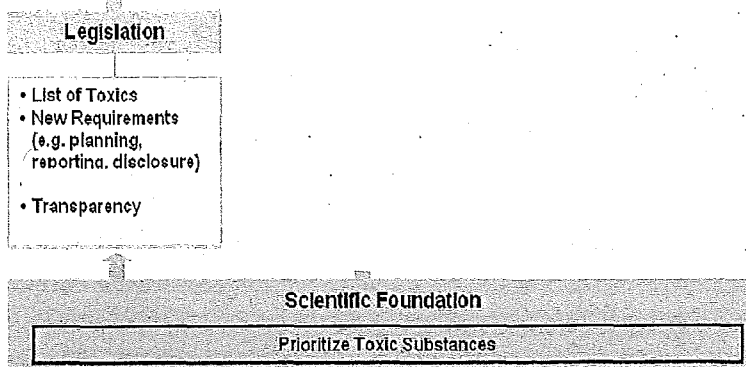
24

Purpose

- What topics are covered in this part of the presentation?
 - Proposed Thresholds and Sectors
 - Process used to develop the designated list
 - Proposed Schedules for implementation and Timing

On what elements of the strategy does this part of the presentation focus?

OBJECTIVE: To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.



Scope

- What defines the scope of the facilities to which the proposed new requirements would apply?
 - The facility belongs to a **designated sector**;
 - The amount of the designated toxic substance used exceeds a specified **threshold**;
 - More than the designated minimum number of **persons** are **employed**; and
 - A substance appearing on the **designated list** of toxics for Ontario is used.

Environment and Climate Change



27

Thresholds and Sectors

- What are the proposed sectors?
 - Manufacturing sector and mineral processing in the mining sector .
- What are the proposed thresholds?
 - Thresholds reflect current NPRI requirements, including alternative thresholds:
 - Over 10,000 kg annually of a designated substance unless alternative threshold applies
 - Employ 10 full time employees or more .
 - Consider lower thresholds over time, if warranted.

Environment and Climate Change



28

Sectoral Scope

	Schedule 1*		Schedule 2*	
	Priority Toxics		Remainder of NPRI	
	~45 toxics		~275 Toxics	
SECTORAL IMPACTS	Tonnes (,000) Emissions	% of Emissions	Tonnes (,000) Emissions	% of Emissions
Manufacturing Sector	7	56%	429	45%
Mining Sector	4	34%	288	30%

* There are 4 proposed schedules

Protecting the environment



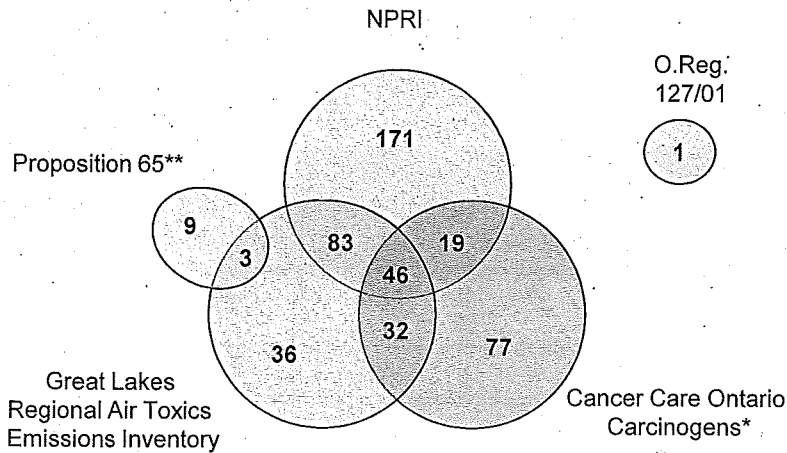
Designated List

- How was the designated list developed?
 - Ministry experts and the Expert Panel reviewed emissions inventories, scientific reviews and priority lists in other jurisdictions to develop a list of designated toxics
- What does the designated list include?
 - The designated list represents substances currently included in emissions reporting under NPRI, Reg 127/01 and/or the Great Lakes Regional Toxic Air Emissions Inventory plus priorities identified by Cancer Care Ontario and Proposition 65 (reproductive /developmental toxicants) *California*
- How would the designated list be used?
 - Would be subject to regulatory or non-regulatory action depending on the timing for implementation and requirements under the Strategy (Schedules 1-4 : for example, materials accounting, pollution prevention plans, reporting).
 - A subset of the Designated List, referred to as the Priority Toxics List, will be subject to immediate regulatory action

Protecting the environment



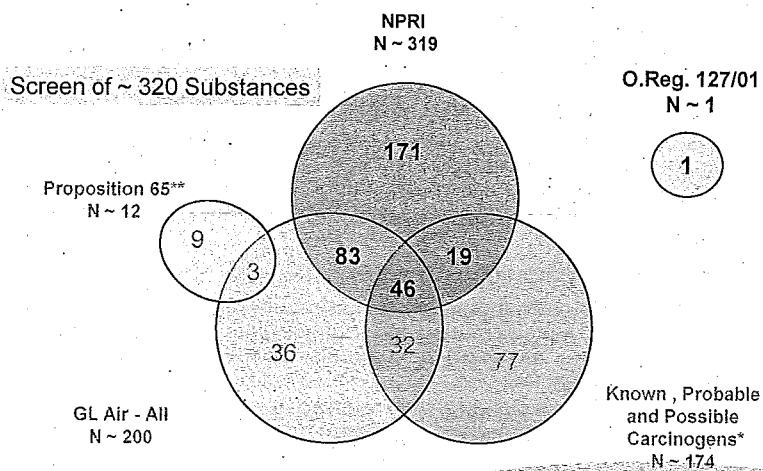
What does the proposed designated substances list include?



* Known, probable and possible carcinogens identified in Gap Analysis document, including IARC 1, 2A and 2B substances as well as NTP Known and Reasonably Anticipated carcinogens. All PAHs identified individually (i.e., not grouped).
 ** Proposition 65 from California is composed of reproductive toxics; Expert Panel has proposed 12 likely to be in use and/or emitted.

How was the priority toxics list developed?

Based on Screen of NPRI 2006 + O.Reg. 127/01 Substances

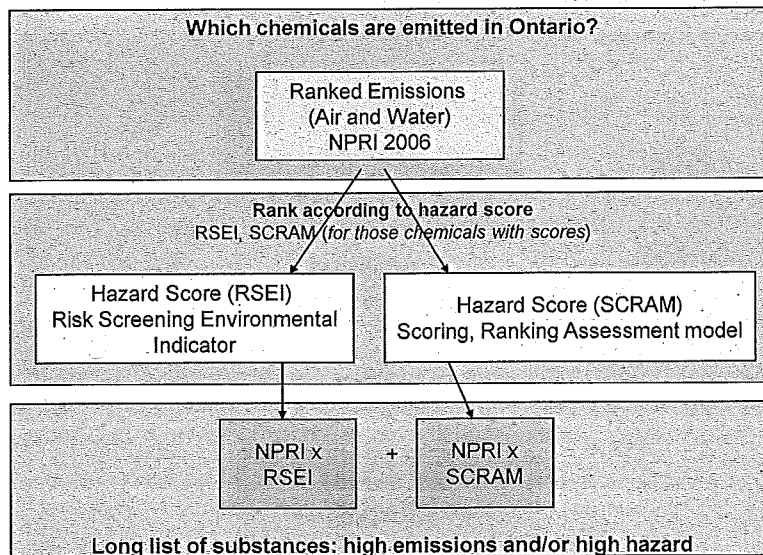


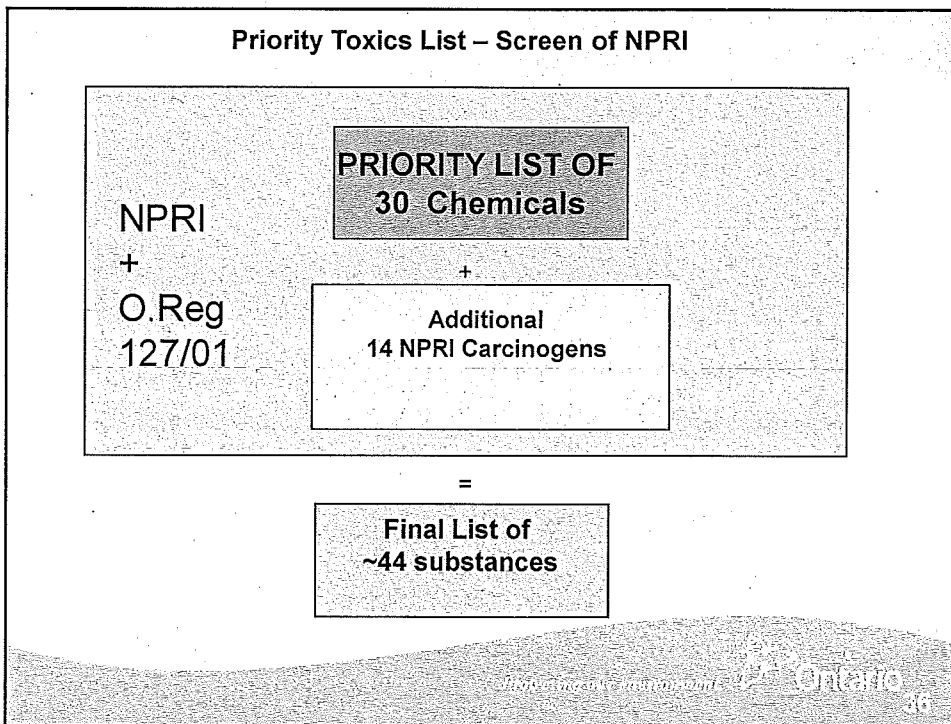
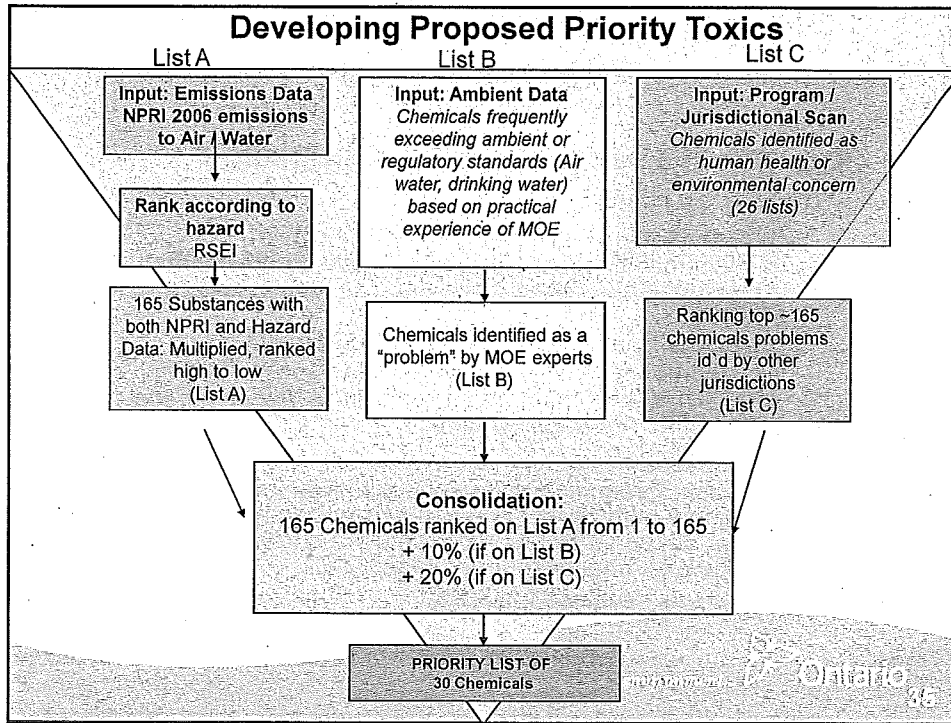
* Known, probable and possible carcinogens identified in Gap Analysis document, including IARC 1, 2A and 2B substances as well as NTP Known and Reasonably Anticipated carcinogens. All PAHs identified individually (i.e., not grouped).
 ** Proposition 65 from California is composed of reproductive toxics; Expert Panel has proposed 12 likely to be in use and/or emitted.

How was the priority toxics list developed?

- How was the hazard ranking conducted?
 - What is SCRAM?
 - A Scoring and Ranking System for Persistent, Bioaccumulative, and Toxic substances for the North American Great Lakes -Resulting chemical Scores and Ranking.
 - Developed jointly by the Michigan Department of Environmental Quality, Surface Water Quality Division (SWQD), and Michigan State University, National Food Safety and Toxicology Centre.
 - What is RSEI ?
 - The Risk Screening Environmental Indicators (RSEI). Considers both cancer and non-cancer human health endpoints. Based on single, most sensitive chronic-health endpoint for inhalation or oral exposure.
 - Model was developed by EPA.

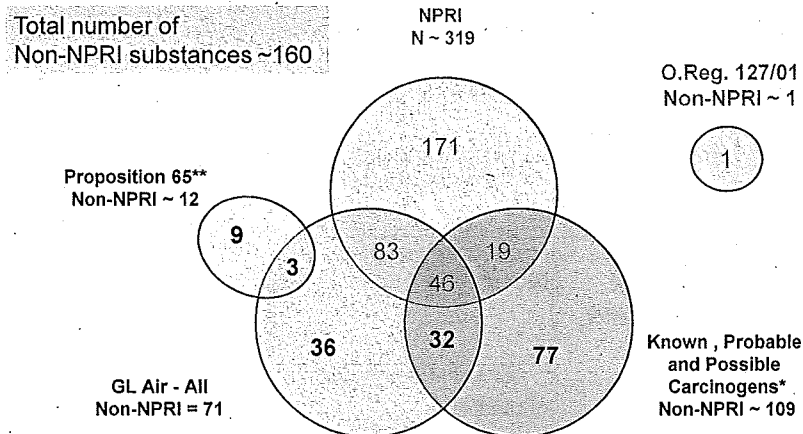
PROCESS FOR LIST A SCREENING





How was the priority toxics list identified?

For Schedules 3 and 4



* Known, probable and possible carcinogens identified in Gap Analysis document; including IARC-1, 2A and 2B substances as well as NTP Known and Reasonably Anticipated carcinogens. All PAHs identified individually (i.e., not grouped).

** Proposition 65 from California is composed of reproductive toxics; Expert Panel has proposed 12 likely to be in use and/or emitted.

How were non-NPRI substances prioritized?

- The following process was used
 - 1) Screen the ~160 chemicals using the Domestic Substances List (DSL) screening criteria:
 - Persistence (P), bioaccumulation (B),
 - Inherent toxicity to aquatic organisms (iTaq),
 - Inherent toxicity to humans (iTh),
 - Human health concern (based on potential exposure (E)),
 - 2) Rank human toxicity (iTh), potential exposure (E) and ecological criteria (P,B, iT)
 - 3) Removed substances that are constituents of the priority list (e.g., coal tar)

United in our environment



38

Materials Accounting

- What is materials accounting and how is it used?
 - A comprehensive method of tracking substances that identifies the inputs and outputs of each substance used by a facility
 - **Inputs** refer to purchases and all other amounts brought to the site to be used in products and processes.
 - **Outputs** refer to amounts that end up in products, by-products, waste or releases into the environment.
 - Used to identify:
 - Which toxics and how much is being used in a facility;
 - Where losses are occurring and reductions could be made;
 - Potential cost-savings;
 - A basis for the development of Toxics Reductions Plans.
 - Carried out by process engineers already working at the facility, or by a consultant who is a professional engineer or technician.

Ministry of the Environment



43

Materials Accounting

- What does the strategy propose regarding materials accounting?
 - Proposes new legislative requirements for regulated facilities to:
 - Monitor and track inputs and outputs of substances on Schedules 1 and 2 (e.g., annually)
 - Also proposes reporting to the government and public disclosure of some materials accounting information:
 - Balance community right to know with protection of confidential business information

↳ mass-trade secrets

Ministry of the Environment



44

Toxics Reduction Planning

- What is Toxics Reduction Planning?
 - A method for facilities to:
 - Analyse current and planned processes that use, produce or release toxic substances
 - Identify a variety of options to reduce the use, production and emission of toxic substances
 - Identify the most viable methods for implementation
 - Establish implementation timelines

Protecting our environment



Toxics Reduction Plans

- What does the strategy propose regarding toxics reduction plans?
 - Proposes new legislative requirements for regulated facilities to:
 - Develop toxics reduction plans for substances on Schedules 1 and 2
 - Implementation of Plans would be voluntary
 - Submit a *summary* of the plan to the government
 - Publicly disclose the plan summaries, while respecting confidential business information
 - Periodically update plan (e.g. every 2-3 years)
 - Possible certification of Plans by accredited bodies

Protecting our environment



Transparency

- What does the strategy propose re public disclosure of facilities-related information?
 - Annual reports prepared by facilities, including:
 - Updated materials accounting information; and
 - Updates on the implementation of Toxics Reduction Plans
 - Summaries of Toxics Reduction Plans

Environment Canada



47

Building Capacity

- What does the strategy propose for consideration to assist facilities in meeting new requirements?

① - Education, outreach, guidance materials

② - On-site technical assistance

- Promotion of new greener technologies

- Economic and other incentives

- tax incentives - see attached document

- recognition system / awards.

Environment Canada



48

Breakout Session 2

1. What are the actual or potential benefits and challenges of undertaking materials accounting and toxics reduction planning?
2. What are the benefits and challenges associated with reporting to the government and the public of materials accounting information, toxics reduction plans and progress in implementing the plans?
3. What types and levels of costs are or would be associated with these activities for your organization, if any?
4. What forms of assistance (technical, financial and other) should the government consider providing to support compliance with the proposed new requirements as well as the development and implementation of toxics reduction plans?
5. Should the Government of Ontario offer training and certification for individuals as toxics reduction planners? Should the government require toxics reduction plans to be certified by accredited toxics reduction planners?

Protecting our environment



49

Toxics Reduction Programming

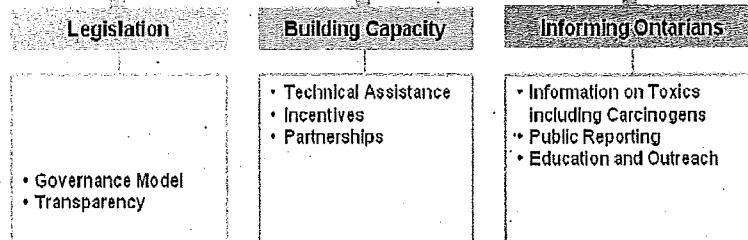
Protecting our environment



50

On what elements of the strategy does this part of the presentation focus?

OBJECTIVE: To help protect the health and environment of Ontarians by reducing the use and emissions of toxics in air, land, water and consumer products.



Informing Ontarians

- What are the objectives of proposed strategy regarding informing Ontarians?
 - Enhance transparency: inform public about toxics use and progress in toxics reductions
 - Promote toxics literacy: Provide public with accessible information on toxics to help them make informed decisions
- How would information be shared?
 - Through a web-based portal and other education and outreach activities
- Proposed approach to releasing information from regulated facilities would balance public transparency with the need to protect confidential business information

Informing Ontarians - Portal

- What would be the purpose of the web-based portal?
 - The proposed portal would have multiple functions:
 - Compliance: electronic submission of annual reports, plan summaries
 - Transparency: public access to this information
 - Educate and inform: reliable source of information on toxics
 - Progress reporting: performance of the overall strategy

Protecting our environment



53

Informing Ontarians – Education and Outreach

- What would be the purpose of proposed education and outreach activities?
 - Use a combination of approaches, including social marketing, to help the public better understand:
 - How they might be exposed to toxic substances
 - What some of the health risks might be
 - How to reduce exposure to toxics
 - How to make wise consumer choices
 - Proposed that information would be developed and delivered in consultation with Cancer Care Ontario, and the Ontario Medical Association and other key partners

Protecting our environment



54

Support for solutions

- What actions could the government consider to further promote pollution prevention solutions?
 - The strategy proposes new collaborations and programs to support the development and implementation of prevention-based solutions and alternatives to toxics use
 - One possible solution is advancing and promoting green chemistry research
 - The Ministry is exploring various potential linkages:
 - Alignment with programs of other ministries and governments that support research and commercialization
 - Academia (research)
 - Centres of Excellence

Governance

- What types of activities could an external body undertake to assist in the implementation of the strategy?
 - Technical support to facilities
 - Centre of scientific research
 - Supporting commercialization
 - Training and certification
 - Public education

Breakout Session 3

1. What actions should the Government of Ontario take to provide Ontarians with the information that they need to make informed decisions related to toxic substances?
2. If the Government of Ontario were to turn to one or more external parties to support the implementation of the Toxics Reductions Strategy, what should be the functions of the external party(ies)? Why? What type of organisation would be best suited to provide such support?
3. What should the government consider doing to further support pollution prevention solutions, through green chemistry, for example?

Ontario
67

Next Steps

- What opportunities are available to comment on the proposed strategy?
 - Completion of the workbooks today
 - Completion of the more detailed survey either today or online by October 11
 - Submission of comments through the Environmental Registry until October 11
 - Further opportunities as draft legislation is considered by Parliament and as regulations are drafted

Ontario
58

