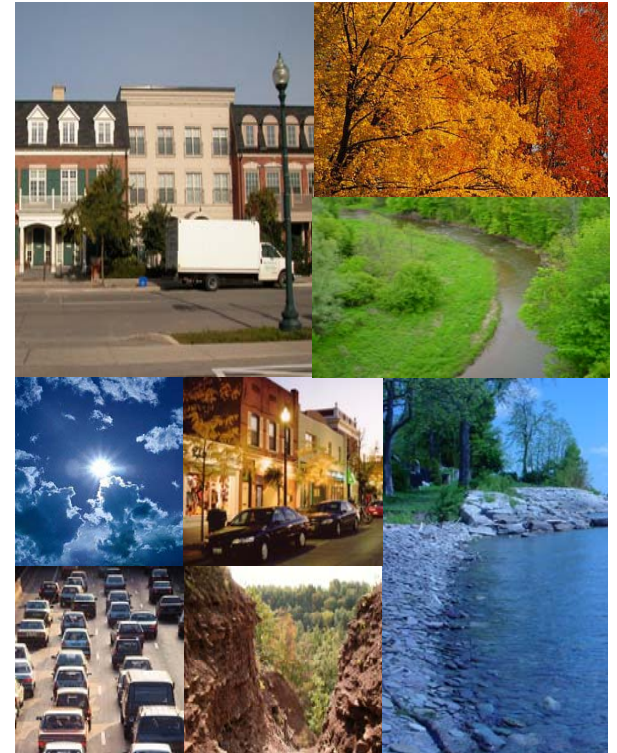


"To be the most livable town in Canada"

Town of Oakville - Health Protection Air Quality By-law

GTA CAC

January 22, 2010



"To be the most livable town in Canada"

Health and Air Quality Context for the By-law

Cindy Toth, Director, Environmental Policy

Air Quality Initiatives

- Council reporting and direction
- Development of legal strategy
- Implementation of legal strategy
 - Provincial and Federal
 - Environmental Commissioner of Ontario

Rationale for Focusing on Fine PM

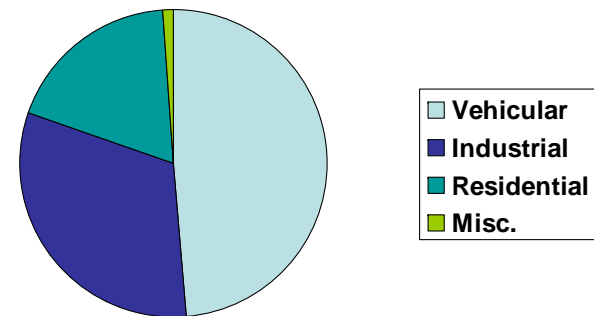
- Fine PM are airborne particles less than 2.5 micrometres in size
- Abundance of scientific and government studies showing serious, fatal health effects from airborne fine PM
- Regulatory gap; no regulatory standards for fine PM emissions or ambient levels
- Part of the Town's effort to reduce the overall airshed burden
- Highlights the public health implications of air emissions and air quality in Oakville

Overview

- Sources of fine PM
- Health effects of fine PM
- Actions underway

Sources of Fine PM

Particulate Matter 2.5

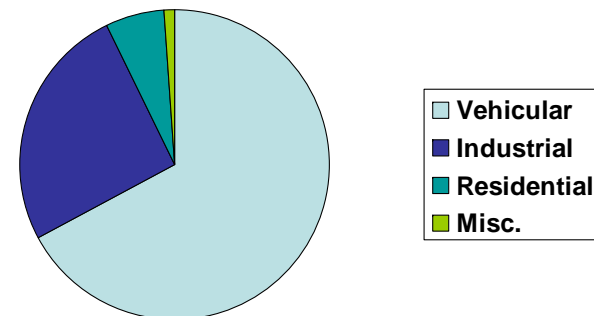


Sources of fine PM emissions:

- Industrial
- Vehicular
- Residential
- Miscellaneous

(Source: Clarkson Airshed Study Part III, Air Quality Dispersion Modelling Source Contribution Assessment, July 2008)

Particulate Matter 10



Health Effects of Fine PM

- Considerable scientific evidence of serious health impacts
- Over 30 studies of health effects associated with exposure to fine PM published in the last 4 years
- Surveys of Oakville residents consistently raise air quality as a key priority

Fine PM in Oakville

- Annual average is: 10 micrograms per cubic metre
 - Roughly 12 in summer and 8 in winter
- During summer, especially during smog events, up to 50% is likely by long-range transport from the U.S. Midwest.
- Major local sources are vehicular traffic, industry and residential (heating). The predominant contributing sector depends on where the monitor is located.

(Source: Clarkson Airshed Study Part III, Air Quality Dispersion Modelling Source Contribution Assessment, July 2008)

Health Effects in Oakville

- Based on an annual concentration of 10 microgram/m³, there will be 80 premature deaths in Oakville attributable to PM_{2.5} pollution every year.
- There will be more of the other outcomes documented in health effects studies.
- For every microgram/m³ added, there will be 8 more deaths: for every microgram/m³ reduced, there will be 8 fewer deaths.

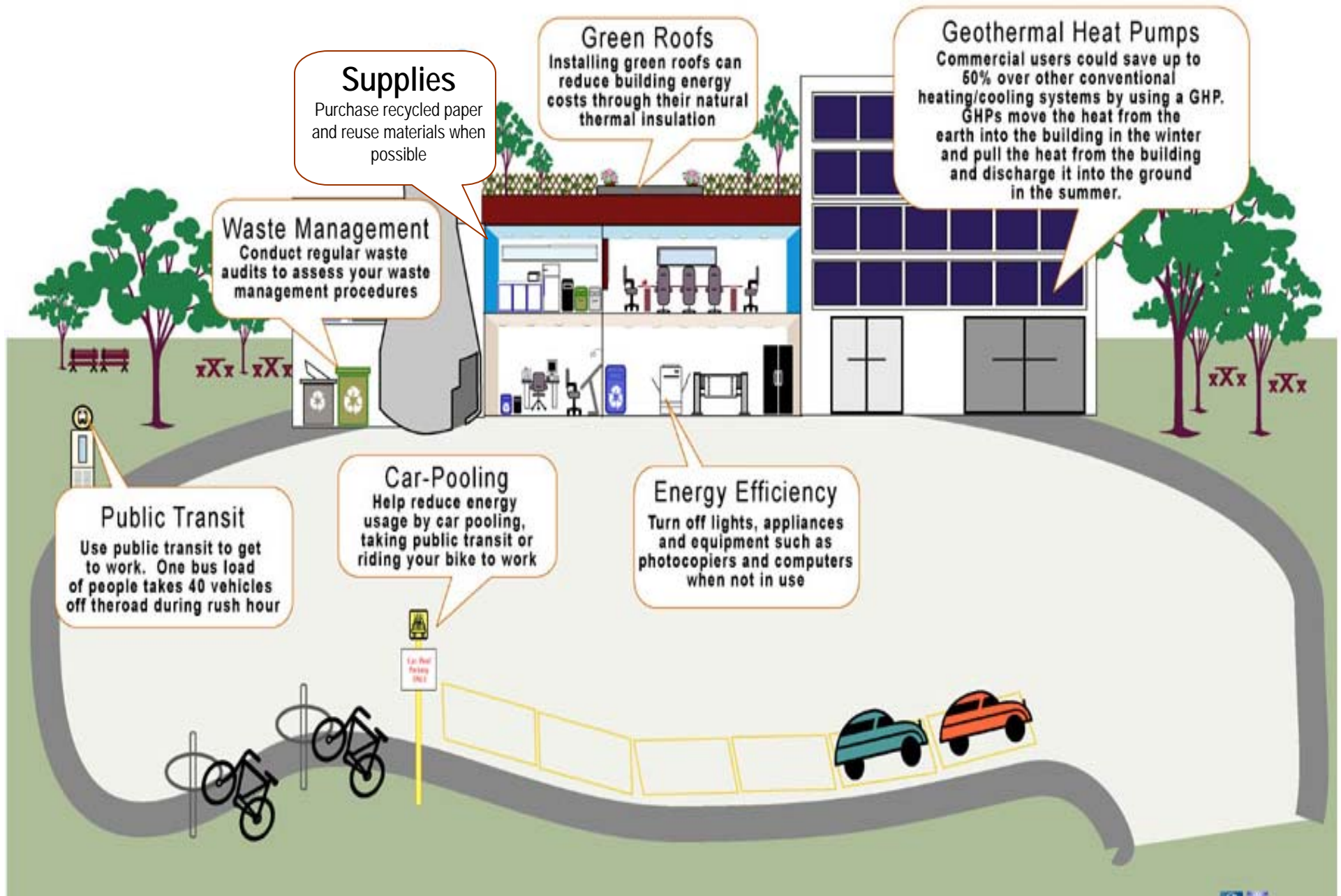
(Source: ICAP 3.0)



Actions

- Town operations
- Town master planning
- Residential stewardship

Town Operations



Town Master Planning

Neighbourhood Parks
Parks are a great spot for artists, performers, community events and gatherings - helping to improve community cohesion.

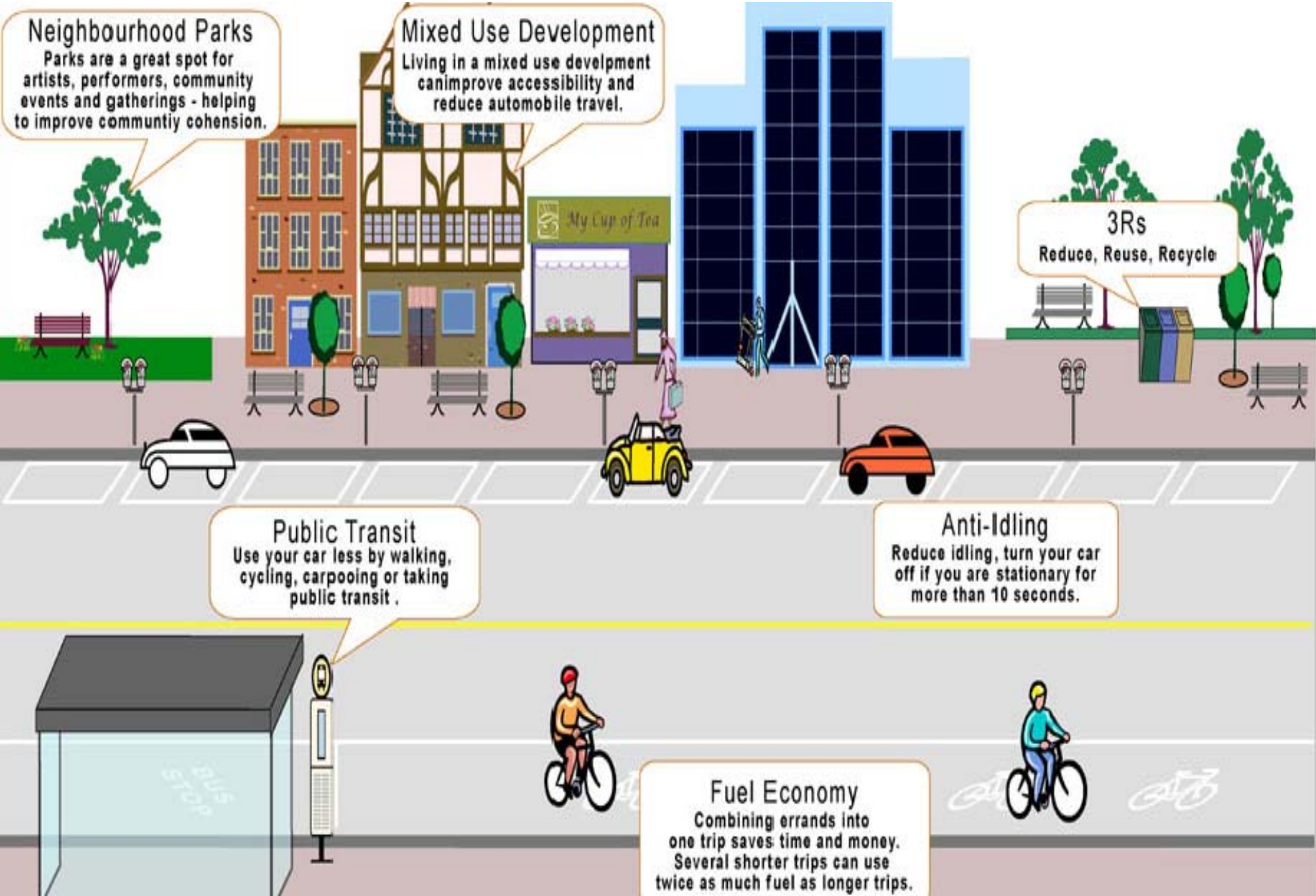
Mixed Use Development
Living in a mixed use development can improve accessibility and reduce automobile travel.

3Rs
Reduce, Reuse, Recycle

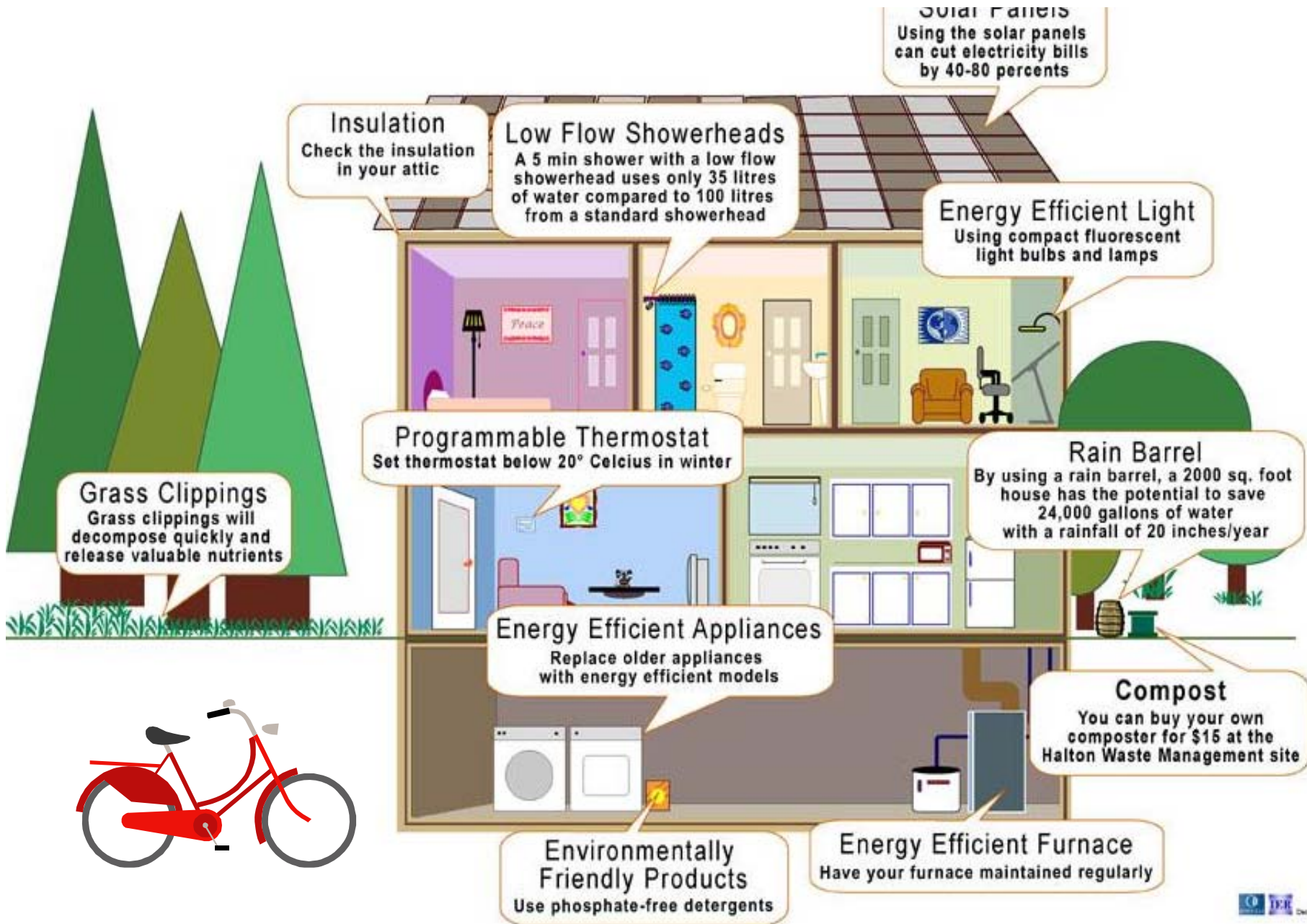
Public Transit
Use your car less by walking, cycling, carpooling or taking public transit.

Anti-Idling
Reduce idling, turn your car off if you are stationary for more than 10 seconds.

Fuel Economy
Combining errands into one trip saves time and money. Several shorter trips can use twice as much fuel as longer trips.



Residential Stewardship



Overview of the Draft By-law

Rodney Northey
Certified as a Specialist in Environmental Law
Fogler, Rubinoff LLP Barristers & Solicitors

Overview

- Legal situation
- By-law authority and purpose
- Key topics:
 - Reporting obligations
 - Approval process
 - Phase-In timeframes
 - Fees

Legal Situation

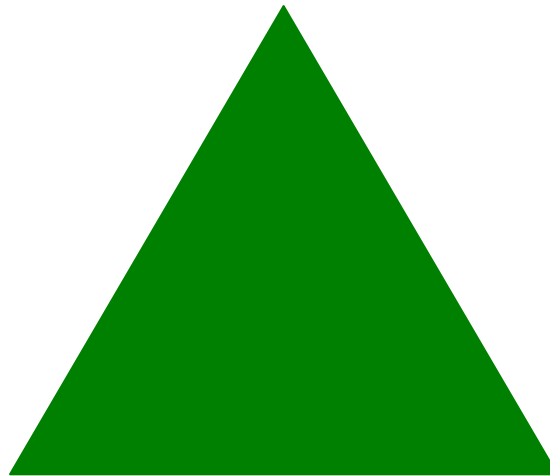
Air Quality Protection: **Appearance**

Ontario Environmental Protection Act (EPA)

Regulation 419/05

-Point of Impingement (POI) standards 300+ contaminants listed

Ontario EPA s.9
Certificates of
Approval (CofA)



Ambient Air Quality
Criteria

Legal Situation

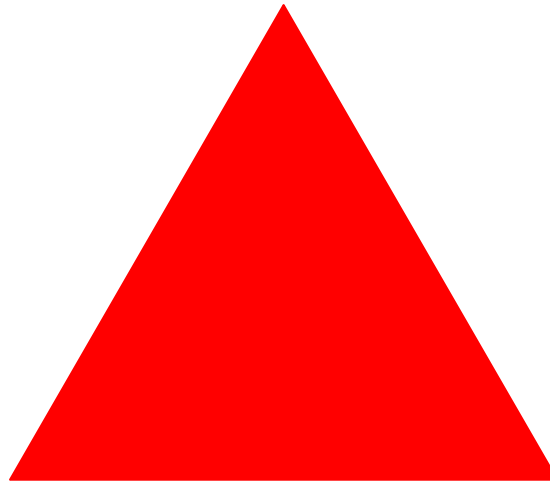
Air Quality Protection: **Reality**

NO REGULATION OF FINE PM

-EPA Reg.419/05: No POI standards for fine PM

Section 9 EPA CofAs

- broad discretion
- no practice of regulating fine PM



Ambient Air Quality Criteria (AAQC)

- none for fine PM
- Canada-Wide Standard for FPM is neither

Town By-law – Authority

Municipal Powers (*Municipal Act, 2001*, as amended)

- Power to pass by-laws re “health, safety, and well-being”
- Power to pass by-laws to prohibit/regulate “public nuisances” and to decide what constitutes a public nuisance
- Limits: cannot “conflict” with provincial law; cannot frustrate the purpose of provincial law

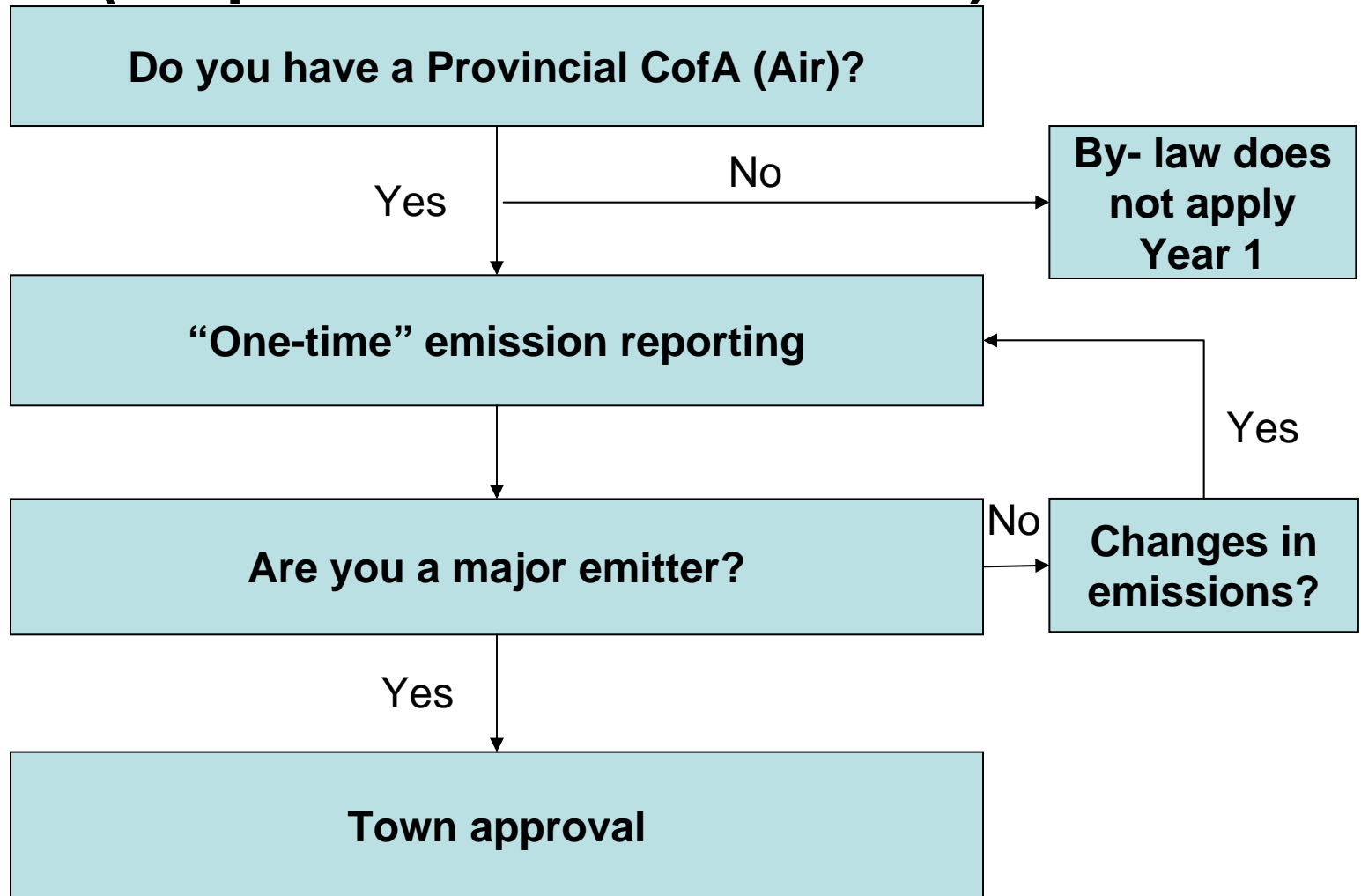
Town By-law – Purpose

- Protect human health from airborne fine PM
- Gather information on sources of emissions of fine PM
- Regulate major emitters of fine PM
- Deem any major emission of fine PM presenting unacceptable risks to human health as a “public nuisance”

Structure

- Part I Purposes
- Part II Application
- Part III Reporting
- Part IV Requirements for town approval
- Part V Town decision-making process
- Part VI Fees
- Part VII Emissions monitoring
- Part VIII Offences
- Part IX Transitional matters
- Part X Severability

Application of the By-law (Proposed Transition Phase)



Reporting

- Set out in Part III of the By-law
- No fee
- When applicable, Part III will require a one-time submission of emission rates of fine PM and precursor pollutants
- Simple additional calculations for CofA holders
- Very similar for National Pollutant Release Inventory (NPRI) reporting
- After initial reporting, will only require submission of new information in future, only if you change your operations and emission rates

Major Emitters

“Major emission“ means an emission from a facility into the air of a health-risk air pollutant that exceeds at least one of the following thresholds:

- (a) for directly emitted particulate matter less than 10 microns in size, more than 500 kilograms per year;
- (b) for directly emitted particulate matter less than 2.5 microns in size, more than 300 kilograms per year;
- (c) for volatile organic compounds, more than 1,000 kilograms per year;
- (d) for nitrogen oxides (as NO₂ equivalent), more than 2,700 kilograms per year; or
- (e) for sulphur dioxide, more than 2,000 kilograms per year.

Major Emitters

Comparison of Regulatory Thresholds (kg/yr)

Health Risk Air Pollutant	Town of Oakville By-law	City of Toronto By-law	Toxics Reduction Act (Ontario)	National Pollutant Release Inventory (Federal)
PM ₁₀	500	-	500	500
PM _{2.5}	300	30	300	300
VOCs	1000	100	10,000	10,000
NO _x	2700	200	20,000	20,000
SO ₂	2000	-	20,000	20,000

Major Emitters – Required Information

- Set out in Part IV
- When applicable, requires a major emitter to submit info to the town and seek approval of the emission
- Required information has five parts:
 - Project description
 - Evaluation
 - Mapping
 - Assessment
 - Appraisal

Major Emitters – Comparison of CofA information

Process Step	CofA's (Air)	Town of Oakville Assessment
1	ID all sources for all listed MOE contaminants (300+)	Identify sources of Health Risk Air Pollutants only
2	Estimate worst-case emissions over varying averaging times	Estimate worst-case emissions over 24-hour and annual time periods
3	Model Impacts: Use screening tools where possible	Model Impacts (including Background): Use screening tools where possible
4	Assess worst-case results against MOE standards	Compare average and worst-case results against public health effects
5	Must be in compliance to obtain CofA (Air)	If not in compliance – present reasonable mitigation plan

Major Emitter – Town Approval

- Town retains peer reviewer to ensure “complete application” and then assesses merits of completed application
- Town Council makes decision on application
 - Can say no if unacceptable health impacts
 - If no, Council decision also deems major emissions to be a “public nuisance”
 - Can say yes even if serious health impacts if public interest supports approval of the major emission
 - If yes, town can impose conditions of approval

By-law Phase-In Proposed

- Set out in Part IX
- Initially, applies to proposed “major emitters” only
- After 6 months, the **reporting** obligation will apply to all existing emitters who have a provincial s.9 EPA CofA
- After 1 year, the **approval** obligation will apply to all existing “major emitters” who also have an EPA CofA
- After not less than 1 year, the **reporting** obligation will apply to all existing emitters who do not have an EPA CofA
- After not less than 2 years, the **approval** obligation will apply to all existing major emitters who do not have an EPA CofA

By-law Fees

- Set out in Part V
- Applicable only for major emissions
- Fees cover anticipated costs to town of addressing approval process
- Major expense is the cost of retaining a qualified, independent peer reviewer
- Presently, by-law proposes a maximum \$25,000 fee
- Town considering other fee options
 - For example, a staged approach to fees

Public Meetings

- To review ongoing health and air quality efforts in the Town of Oakville
- To discuss the need for a new by-law focused specifically on protecting human health from airborne fine particulate matter
- To review the components of a draft Health Protection Air Quality By-law
- To consult with residents on the draft by-law

**Questions and comments on the draft by-law are
welcome until Monday, January 25, 2010.**

Please email healthprotection@oakville.ca

Additional Contact Information:

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