

Roundtable on the Environment for the 21st Century Report Charting Stratford's Environmental Future...

December 2004



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Acknowledgements

The inaugural meeting of the Roundtable for the Environment for the 21st Century for the City of Stratford was held in February 2002. It was established largely through the efforts of then Councillor Jim Chapryk. Councillor Mike Jorna served as Chair for the first two years and the effort had the strong support and participation of then Mayor Karen Haslam. All three demonstrated a strong and enduring commitment to the environment. After the municipal election in November 2003, Councillors Chris Rickett and Sam Dinicol continued to demonstrate that same level of support and commitment.

The other members of the Roundtable, who have continued to work diligently toward the completion of this report, are:

- Jeff Brick – Coordinator of Hydrology and Regulatory Services, Upper Thames River Conservation Authority
- Eric Eberhardt – member of the 1992 Roundtable, representative of the Energy and Environment Committee of the City
- Bonnie Henderson – Chairperson, Perth County Greenworks
- Keith Hillyer – citizen representative, acting as Vice Chair (2001-3) and as Chair (2003-4)
- Penny Keegan – representing the Civic Beautification and Environmental Awareness Committee
- Lyndon Kowch – Manager of Public Works, City of Stratford
- Rachel McCormick – Public Health Inspector, Perth District Health Unit
- Dan Martin – Manager of Parks and Forestry, City of Stratford
- Liz Mountain – representing the Energy and Environment Committee of the City of Stratford
- Ginette Ouellet – citizen representative (2001-2)
- John Sewell – citizen representative
- Donna Taylor – Director of Health Protection, Perth District Health Unit

The Roundtable has also been ably supported in its deliberations by Kathy Bjorkquist, Tracy Louwagie and Michelle Eidt, who have all served at various times over the past two years as Recording Secretaries to the Roundtable.

This report was edited and designed by the Upper Thames River Conservation Authority.

UPPER THAMES RIVER
CONSERVATION AUTHORITY

1.0 Executive Summary

In 1993 a citizen group presented Stratford City Council with the Roundtable for the Environment Report which became the City's guiding document for environmental decision-making.

In 2004 a new citizen group, established by Stratford City Council, completed a report card on the City's environmental accomplishments since 1993 and prepared a new environmental plan, all of which are contained in this document.

Included in this report are the following recommendations:

1. That the City of Stratford take the necessary steps to encourage the implementation of the goals, targets and local actions contained in this document regarding the City's water management, drinking water, natural environment, waste management, transportation and energy.
2. That the City of Stratford adopt an Environment First Policy and pass the following resolution:

"We the Council and the employees of the City of Stratford are committed to examining and assessing potential environmental impacts in all Corporation services and programs as a part of the decision making process and to recommend appropriate actions that are achievable and within our jurisdictional authority in order to optimize environmental benefit."
3. That the City of Stratford adopt the Federation of Canadian Municipalities' statement of environmental policies and work towards completing the five milestones of Partners for Climate Protection.
4. That the City of Stratford set an example for its citizens by allocating resources to the implementation of this report by appointing an Environmental Coordinator whose function it will be to move the City's corporate activities toward environmental sustainability.
5. That the City of Stratford move toward ISO 14001 Certification as a way to provide leadership in environmental matters.
6. That the City of Stratford ensure the Roundtable on the Environment for the 21st Century remain a vibrant document that is reviewed for successes, and revise targets and goals every two years through the City's Energy & Environment Committee.

2.0 Introduction

In today's society people are increasingly realizing that the large environmental issues facing the world begin with the decisions each of us make in our daily lives, and not in forests distantly removed from our communities, or oceans far from our municipal borders, or with continental airsheds far beyond our control. Climate change, smog days and polluted groundwater all begin with the decisions each of us make in our daily lives.

How we design our neighbourhoods and homes, protect our natural features and promote environmental stewardship, can play a large role not only in making our community a better place to live, but also in enhancing the quality of life for the entire planet. This is truly a case where you cannot make the world a better place without first making your neighbourhood a better place.



North Shore Trail, Lake Victoria, Stratford

Photo: Richard Bain

3.0 Current Environmental Conditions

3.1 Background

In October 1993, a group of citizens presented Stratford City Council the Roundtable for the Environment Report, which became the City's guiding document for environmental decision-making.

During the next 10 years, many of the original report's goals and suggestions became part of everyday living in Stratford. However, during that decade attitudes, concerns, priorities and technologies evolved to the point where it was deemed necessary to revisit the original report.

In 2001 Stratford City Council established the Roundtable on the Environment for the 21st Century with a mandate to report on the environmental successes to date and to develop a new plan to guide the City for the next 10 years.

This new committee reviewed the original report and gathered information from various city departments and local stakeholders in order to develop a report card on the City's environmental successes.



Source: Stratford And Area Round Table for the Environment (1993)

3.2 Report Card

Waste Management

One of Stratford's major environmental successes was in the area of waste management. The City's "Pay-As-You-Waste" system has realized a 61% increase in recycling, with a corresponding 34% drop in residential waste, since the program's inception in 1997.

Some of the City's other successes include:

- From 1993 to 1996 the majority of apartments were placed on line with the recycling collection system.
- An estimated 70% of the community has purchased a backyard composter.
- All leaves and yard waste are banned from disposal with other garbage at the landfill but are diverted for composting in a monitored windrow operation at the City landfill.
- All recyclables and a variety of construction materials, tires, etc. are handled separately at the City's landfill operation.

While these are all notable successes, there are still many opportunities to extend the life of the City's landfill and to return more materials to the resource stream. One of the 1993 recommendations was to institute a household organics pick-up. This program was tendered but was not bid on. With residential organics comprising 30% of the City's waste stream, a household organics pick-up has the opportunity to dramatically increase the life of the City's landfill while creating a marketable product.

Energy

Conserving energy has a direct pay-back in the reduction of pollution. Ongoing programs involving education and incentives have enabled most citizens to dramatically improve the energy-efficiency of their lifestyles. Likewise, the City of Stratford has also embraced energy-efficiency measures, some of which are:

- The City completed an energy audit of all municipal buildings in 1992?. All efficiencies with a five-year payback were implemented, and the remainder will be implemented with future renovations.
- The Street Smart Program to deal with energy efficiency of street lighting.
- Council adopted an anti-idling by-law with enforcement commencing in 2002.

While these developments are beginning to take Stratford in the right direction, the 2003 Black-out illustrated the need to embrace more energy-efficiency community-wide. Plenty of opportunities remain for further improvements in energy-efficiency. It is up to the City to encourage further efficiency measures through example, education and promotion throughout the community.

Agriculture

Recognizing that Stratford has strong agricultural roots and is surrounded by prime agricultural land, the City has set density targets for new developments in order to realize residential intensification, rather than continued sprawl.

Intensification

Realizing that residential intensification is both fiscally prudent and environmentally responsible, the City of Stratford has instituted numerous measures to encourage infilling within the City. The following are some of the highlights of the City's accomplishments since 1993:

- The Community Improvement Plan for Stratford's Heritage Conservation District provides property owners with building upgrade loans and tax increment financing to encourage residential apartments in the downtown core.
- The City is developing a Brownfields Strategy that proposes providing financial assistance for the development of contaminated land. These two policies represent a large step forward for the City in encouraging more efficient use of its land. When looking at intensification it is important to realize that the more intensive a community's development is, the greater the per hectare tax base will be. Intensification offers environmental and social benefits as well as reducing sprawl and encouraging more citizen interaction. There is still room for improvement in the City to encourage even more efficient use of its land mass.

- A series of smaller parks have been naturalized – SERC pond (1999), Meadowrue (1999), Cooper Standard (2000), Greenwood Park (2003/04), Packham Road Complex (2004), Kemp Crescent and Battershall Parks (2004).
- In 2001 herbicides were eliminated in City parkland, with the exception of sports fields and some formal park areas, resulting in an 85% reduction in the use of herbicides.
- The demand for water in Stratford has decreased by 9% over the last 10 years.
- The Stratford Groundwater Study was commissioned by Council and adopted into the City's Official Plan.
- These strides illustrate that the citizens of Stratford consider natural areas to be both environmental and community assets that enhance our quality of life. It is important for Council to continue naturalizing areas and embracing measures that will enhance the community's natural environment.

While there have been many environmental success stories and steps taken in Stratford, plenty of work still remains to reduce the City's ecological footprint. For more information on the City's successes and what still needs to be completed, view Appendix A: Where We Are.

Transportation

How the City designs neighbourhoods and organizes the movement of citizens throughout the community plays a large role in pollution. Encouraging alternative forms of transportation and fuels as well as community design that promotes walking and biking can help reduce pollution.

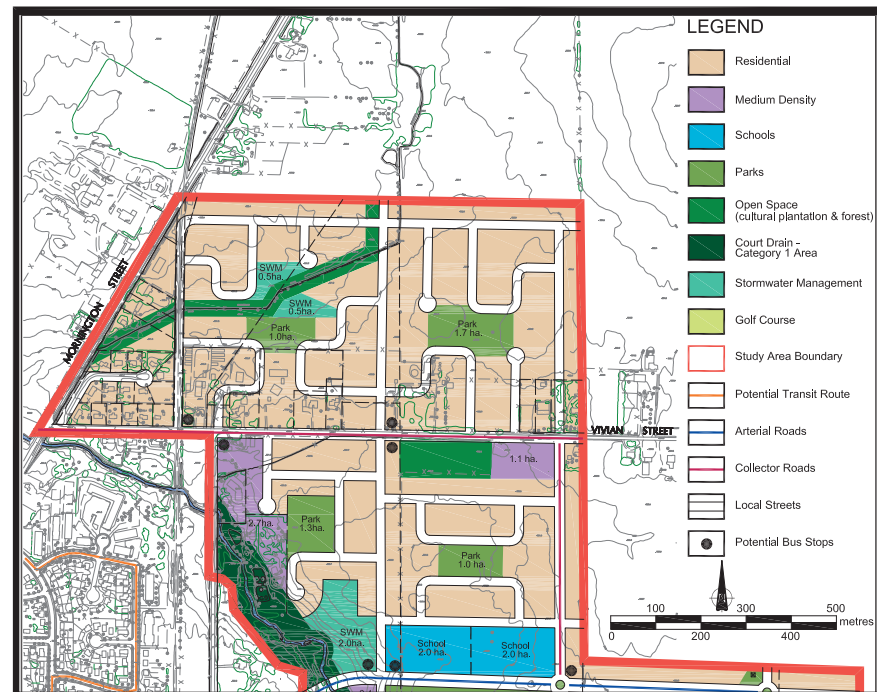
Stratford has begun to make improvements in these areas, such as:

- The North East Secondary Plan includes room for bike paths and provides pedestrian greenway linkages.
- A Bicycle Plan has been adopted and a committee formed to implement its recommendations.
- An Alternative Fuels & Vehicle Procurement Committee has been formed to look at environmentally friendly fuels and efficient vehicles for the city. There remains much to do in reducing the impacts of vehicle use in the City. There also needs to be more promotion of alternative forms of transportation in order to reduce the environmental impacts of transportation on Stratford's air, water and land.

Natural Areas

Stratford's attention to its parklands, its tree planting programs and its commitment to naturalization are among the City's environmental success stories. The City has also made great strides in protecting its water resources and enhancing water quality in the watershed. Specifically, the following aspects are noteworthy:

- 6725 trees were planted on city streets and boulevards between 1988 and 2003, and 924 trees were removed during the same period, creating a replacement ratio of 7.27 trees planted for every 1 removed.
- T.J. Dolan Natural Area was created featuring 8 km of trails and the naturalization of 20 ha (50 acres) between 1992 and 2000.



Portion of land use concept from the NE Secondary Plan

Photo: GSP Group

4.0 Roundtable Process

With the report card completed the Roundtable committee then began developing environmental goals, targets and implementation strategies to guide decision-making in Stratford for the next 10 years. These environmental strategies received intense public review and are included in this report as Appendix B: Public Input.

4.1 Definition of New Categories

The 1993 Roundtable Report was a comprehensive report that dealt with areas such as energy, transportation, waste management, quality of life, land-use planning and agriculture. The committee felt that there were overlaps in these categories and defined the following new categories to better represent the concerns of today:

- Drinking Water
- Water Management
- Natural Environment
- Waste Management
- Energy
- Transportation

4.2 Definition of Goals, Targets, Local Actions Required & Best Bets

For each of these categories the committee developed goals with corresponding targets that are measurable and have a timeline, along with local actions that are achievable and specific for each target. In order to encourage the process and enable councillors and staff to start working immediately towards the Roundtable's goals, the committee created "best bets" that are actions that can be achieved with minimal resources in a short time period.



4.3 Public Input

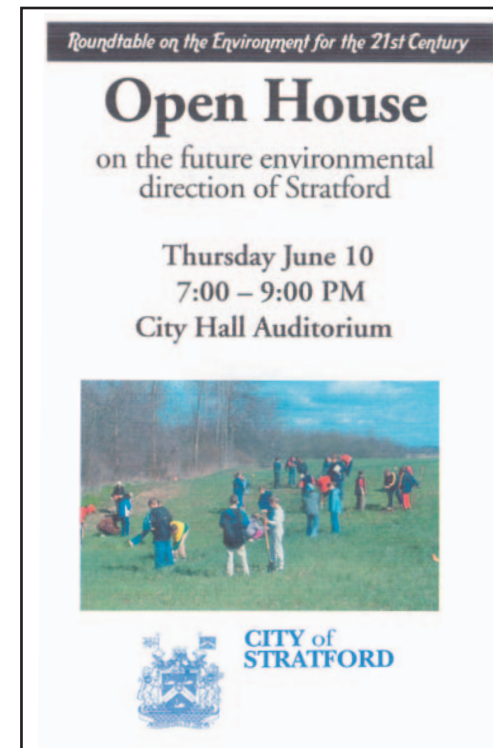
Once the committee had developed goals, targets, local actions required and best bets for each category, the draft document was presented at a public meeting hosted by the Roundtable for the Environment for the 21st Century Committee on June 10, 2004 in the City Hall Auditorium. The public meeting involved a presentation by committee members followed small group brainstorming sessions where participants were asked to share their concerns and thoughts on the goals, targets and local actions required to improve Stratford's environment. The meeting was attended by over 100 citizens.

Some of the common themes that came out of the public meeting were:

- The need for the municipality to take a lead on environmental issues.
- The need to communicate the Roundtable's findings to citizens and to illustrate how citizens can help reach the goals and targets set forward.

A complete listing of ideas from the public meeting can be found in Appendix B of this report.

The discussion was lively and enlightening, and by the end of the meeting participants had a real sense of ownership of the document and many of their ideas were incorporated into the final report.



5.0 Roundtable on the Environment for the 21st Century Report

Drinking Water

Water is one of our most precious resources. The City of Stratford must do all it can to protect the sources of our drinking water from depletion and contamination. Water is vital to all living things.

Goals	Targets
Protect drinking water sources from contamination.	Continue to provide safe drinking water to the residents of Stratford.
Promote water conservation.	Reduce water usage by 15% by 2010

Municipal Actions Required:

- Lobby provincial and federal governments for stricter regulations/standards regarding source water protection.
- Implement recommendations of the Perth County Groundwater Study (January 2003).
- Cooperate/consult with neighbouring municipalities regarding land use planning, source water protection and watershed management.
- Complete inventory of private wells within the City of Stratford.
- Wherever possible ensure residents are connected to municipal water and sewer and that private wells and sewage systems are properly decommissioned by 2010.
- Provide sufficient funding for sewage treatment plant to decrease primary discharges.
- Follow recommendations of Pesticide Committee regarding the use of pesticides on private and public lands.
- Explore issues around high chlorine levels in City of Stratford drinking water.
- Educate watershed residents on urban best management practices related to pesticide use, herbicide use and proper household hazardous waste disposal.
- Increase water and sewage rates to encourage conservation.
- Lead the way in the use of rain barrels to water gardens and flowerbeds, and promote proper use of rain barrels.
- Install water saving devices, such as low flow toilets and faucets, in City buildings.
- Educate the public on ways to conserve water.



Mornington Street Well, Stratford



Dufferin Water Tower, Stratford

Best Bets For The City:

- Increase number of hazardous waste collection days within the City of Stratford.
- Provide waste oil depot at the landfill.
- Educate the public on ways to conserve water.
- Provide rebates to residents who install low flow toilets, showerheads or faucets or rain barrels.

Things you can do at home..

- Turn off the tap - when washing or shaving partially fill basin and use this water. This can reduce your water use by up to 60 % while completing these tasks.
- Check for leakage - find your water meter and record its reading late in the evening and first thing in the morning, if there was any movement during the night, find the leaks and fix them.
- Use low flush toilets and low flow showerheads. A low flush toilet can reduce water consumption by up to 80%.

Water Management

The Avon River and its tributaries are important environmental features in the City of Stratford. It is our goal to improve the aquatic health of this resource.

Goals	Targets
Improve the aquatic health of the Avon River.	<p>Work with watershed residents to develop a collaborative, community-based subwatershed plan for the Avon River by the end of 2005.</p> <p>Decrease the Avon River Benthic Index from 5.23 to 5.00 by 2010 (the larger the number, the more pollution-tolerant benthos are present).</p> <p>Decrease the Avon River Phosphorous loading from 0.12 mg/l to 0.06 mg/l by 2010.</p> <p>Decrease the Avon River Bacteria Index from 711 per 100 ml to 300 per 100 ml by 2010.</p> <p>Decrease the Avon River conductivity Index from 900 Fs/cm to 600 Fs/cm by 2010.</p>



John Street Weir, Stratford

Photo: Eric Eberhardt

Municipal Actions Required:

- Obtain community input on the subwatershed report card and based on this input, develop a community based action plan for the subwatershed.
- Require stormwater management for all new development.
- Retrofit existing developments with stormwater management quality control.
- Plant buffers along all open drains and the Avon River.
- Educate watershed residents on urban best management practices related to pesticide use, herbicide use and proper household hazardous waste disposal.
- Develop a road salt management plan with the goal of reducing the use of road salt.
- Permit and encourage the use of pervious pavement for parking areas to reduce runoff.
- Develop a waterfowl management plan for Lake Victoria.



Mayfly nymph. The invertebrates found in the stream are an indicator of aquatic health.



Blackside Darter from Avon River. Darter species indicate reasonable habitat and water quality.

Best Bets For The City:

- Require stormwater management quality control for all new development.
- Review City policies for management of open drains and ditches.
- Implement a Yellow Fish Road Program to increase awareness of the impact of point source contamination.
- Provide subsidies for residents to purchase rain barrels.

Things you can do at home...

- Watering your yard - water in the *coolest* part of the day (i.e. early mornings) and on non-windy days to avoid evaporation; place sprinklers so as to avoid water landing on the road or driveway; water your lawn only when it needs it during dry spells; encourage deep root growth by infrequent deep waterings (e.g. soak ground to 2-3cm depth every five days) instead of light, frequent waterings.
- Reduce or eliminate use of pesticides on private property.
- Use water collected from rain barrels to water plants and gardens.

Natural Environment

Stratford's natural environment includes natural woodlands, early successional areas, manicured public parks, outdoor recreation areas and boulevard trees. Stratford should advocate for a natural environment system on public and private land that meets human needs while respecting the ecosystem.

Goals	Targets
Develop a plan to maintain existing natural woodlands and increase natural woodland cover.	Protect all existing natural wooded areas and increase the natural woodland cover from 2.6% to 3.5% by 2010.
Provide trails within and between municipally owned natural areas.	Expand the multi-use trail system by 2010. Add new trails to existing and new natural areas by 2010.
Implement and maintain a tree management plan for privately and publicly owned land in the City of Stratford.	Plant new trees (boulevards and park plantings) as per the Urban Forestry Plan. Maintain trees using the standards outlined in the Urban Forestry Plan. Complete a data base inventory of individual trees on City land by 2006. Maintain existing privately owned trees and increase by 10% within 5 years.

Municipal Actions Required:

- Complete a natural heritage inventory for the Stratford that includes an inventory of the size, location and composition of all remaining natural woodland cover in the City.
- Develop a plan for natural woodlands collaboratively with stakeholders. Consider the range of implementation options (education, incentives, stewardship, regulations, land acquisition) as tools to protect existing woodlands.
- Develop management policies to guide the City in maintaining City-owned natural woodlands.
- Identify ways for converting existing manicured municipal areas to natural cover.
- Support reforestation projects and creation of natural habitat.
- Educate the public on the benefits of natural areas.
- Use part of the 5% parkland dedication to expand natural area coverage in strategic locations.
- Update the City's noxious weed by-law.
- Expand the parkland system to link existing and new natural areas and parks.
- Create interpretive trails as an education/information tool.
- Continue tree planting requirements in new development areas and provide trees to residents for boulevards.
- Continue tree replacement policy for trees that are removed due to damage, safety concerns or disease.
- Encourage the use of native trees and shrubs for all projects undertaken or approved by the City.
- Accept a methodology (data base, GIS) for quantifying the existing tree numbers in Stratford.
- Implement a tree protection by-law.

Best Bets For The City:

- Incorporate the Stratford Natural Heritage Inventory (2004) into the Official Plan.
- Use part of 5% parkland dedication to protect "at risk" natural woodlands.
- Naturalize Devon Street Corridor.
- Naturalize Dufferin Park.
- Naturalize Marsh Pond.
- Adopt a policy for the annexed lands that would divide the 5% parkland dedication between naturalization and active parkland.
- Set up a memorial forest program.
- Replace some of the annual flower beds with perennials on a trial basis.
- Identify trail corridors and linkages in the NE Secondary Plan and the West Secondary Plan.
- Establish a permit system to regulate private tree removal.
- Create a policy requiring tree replacement for permitted private tree removals.

Things you can do at home...

- Cut your lawn at a high setting to reduce weed growth and retain moisture.
- Re-seed areas that are bare in your lawn as quickly as possible to avoid soil erosion.
- Landscape your yard to avoid water run off by considering plant cover other than grass http://www.city.ottawa.on.ca/city_services/yourhealth/environmental/lawn_5_4_en.shtml.
- When planting trees and shrubs, plant native species as they generally require little more than the water nature provides.
- Call 271-0250 ext. 243 to have the Parks & Recreation Department plant a tree on your property for free.

Waste Management

The City of Stratford's Waste Management System is a full user-fee based system. Extending the landfill's life and reducing the City's ecological footprint will require ongoing waste diversion and reduction strategies.

Goals	Targets
Implement full stream composting.	Decrease the percentage of organic material in the residential waste stream from 30% to 15% in 5 years through diversion programs and education.
Promote product stewardship.	Advocate for deposit and return.
Increase the volume and material types for the recycling program.	Increase the tonnage collected by 10% within 2 years.
Increase material diversion and recycling at the landfill.	Meet MOE targets of 50% of blue box wastes captured by the end of 2006 and 60% by 2008.
Decrease hazardous waste (household and industrial/commercial).	Divert lumber and other cut wood waste from disposal at landfill site. Decrease quantity of residential hazardous waste being disposed of in landfill.
Introduce electronic waste recycling.	Divert 100% of electronic waste from landfill site.
Corporate procurement practices to reflect "closing the loop."	50% of material purchases should include post-consumer recycled content.
ISO 14001 designation.	Review and implement for 2006.



Stratford Land Fill Site

Best Bets:

- Promote backyard composters, sell at a unit price of less than \$25 or give away some free units.
- Depot for plastic film.
- More recycling containers in the core using blue units.
- Promote accomplishments and success stories in the media.
- Make presentations to schools and industry groups
- Use "recycler of the month" promo to educate residential users.
- Implement trial program to review participation.
- Education materials handed out on household hazardous waste days.
- Municipality to purchase 10% post-consumer paper by 2005.
- Ban asphalt shingles from landfill.

Municipal Actions Required:

- Establish a curbside collection system for organics from households.
- Promote a city-wide Master Composter educational and training program.
- Municipality should provide backyard composters.
- Expand program to take a wider range of materials such as plastic film, aseptic containers and textiles in curbside and/or depot collection system. Some of this is currently being conducted by charitable organizations or by using other private organizations and businesses.
- Continue education and promotion of existing program.
- Increase accessibility to the program for multi-residential sector by revamping site plan agreement process to incorporate the need to accommodate recyclable containers and access to containers.
- Include a variety of additional blue box materials in tender for collection.
- Ban construction and demolition wood waste from landfill. Educate builders and construction companies regarding need to separate materials. Incorporate gypsum recycling into landfill diversion program.
- A targeted educational program to homeowners regarding alternates and reduction of usage. Using all materials up or saving them for proper disposal also needed as part of education.
- Divert material from landfill and curbside waste, set up free drop off program for residents, minimal charge (to cover costs) for Institutional, Commercial and Industrial.
- Purchase post consumer recycled papers throughout Corporation.

Things you can do at home...

Organics

- Buy a composter from the City of Stratford for \$25.
- Pick up a brochure on what to put into backyard composter and what not to - "trouble shooting tips".
- Pick up information on how to build your own backyard composter.
- Pick up free compost from the landfill site in the spring.
- Use your compost in your gardens to aid in plant growth and help maintain soil moisture.
- Plant a vegetable garden with your compost and grow your own organic vegetables.
- Plant flowers and plants to attract birds that will help control insects.
- Mulch your grass clipping and leave on the lawn, they aren't accepted for curbside leaf and yard waste collection and they will fertilize your lawn.

Blue Box

- Reuse plastic grocery bags or take them to Food Basics or the Beer Stores for recycling. Bring your own cloth bags to stores.
- Recycle aerosol cans.
- Recycle gable top milk and juice cartons by cutting out the plastic spout.
- Recycle plastic containers with a recycle symbol and numbers 1 to 7 (with the exception of Styrofoam and film).
- Only buy containers that are accepted in the blue box.
- Take reusable materials to Goodwill, House of Blessing and Habitat for Humanity, or have a garage sale.
- Buy in bulk for materials you know you will use.
- Buy pre-recycled paper and other products.
- Buy refillable containers and reuse them.
- Wrap presents with newspaper comics or flyers.
- Make litter-less lunches for school and work by using reusable containers.
- Buy recyclable milk containers or reuse milk bags for the freezer or lunch bags - they are sturdier.

Household Hazardous Waste

- Buy natural cleaners instead of hazardous cleaners. Mix 2 parts Borax with 1 part baking soda for an all purpose cleaner, use vinegar and water to wash windows and glass.
- Take used motor oil and filters to the Public Works Department located at 303 King Street 5 days a week.
- Make sure you clean out your garage and basement of all hazardous materials you no longer use prior to the Hazardous Waste Depot.
- Latex or water-based paint is better for the environment than oil-based paint.
- See if a neighbour or friend could use left over cleaners or paints.
- Collect your batteries in a jar and bring them to the Hazardous Waste Depot.
- A slice of potato removes fingerprints from painted wood.
- Only buy what you know you will use, some cleaners come in smaller packages.

Landfill

- Donate reusable materials to a charitable organization like Habitat for Humanity.
- See if the material can be fixed before throwing it out - like a chair or lawnmower.
- Use the shingle diversion bin if you are redoing your roof.
- Use the recycle depot for all recyclable materials - if you transport your garbage in a cardboard box, empty it and throw it in the cardboard bin.
- Donate your old computer to Swan Pack.
- Buy food and other products with reusable, recyclable and reduced packaging.
- Use cloth bags for your shopping trips.
- Buy products that are well-made and durable, that way you'll reduce waste while saving time, money and aggravation.

FACT:

Currently 30% of the residential waste stream is organic, all of which could be diverted through household composting, or a green box organic recycling system.

Transportation

Transportation accounts for 32% of Canada's greenhouse gas emissions. How Stratford designs neighbourhoods and organizes the movement of its citizens throughout the city can play a significant role in reducing the environmental impacts of transportation.

Goals	Targets
Reduce dependence on private vehicles.	Reduce private vehicle kilometres travelled by 10% in 5 years.
Decrease vehicle reliance on greenhouse gas emitting fuels.	Reduce automobile ownership in the city by 10% in 10 years.
Divert unneeded transport truck traffic around city.	Reduce city vehicle fleet emissions.
Broaden southern Ontario transportation network.	Increased Via Rail service – twice in the morning and twice in the evening from and to Toronto.

Municipal Actions Required:

- Encourage mixed-use development so that amenities are within walking distance.
- Encourage infill development – greenfield development should be last resort for development.
- Encourage residential development within City's downtown.
- Establish bike paths and nature trails throughout City.
- Make downtown core more pedestrian friendly.
- New residential developments should feature a traditional grid format, which provides for more connectivity and less car use.
- Make pedestrian friendly residential developments via interactive streetscapes that feature sidewalks, nature trails and bikeways as well as front porches and dwellings closer to the street.
- Promote transit as an alternative – making transit more comfortable and conveniently accessible.
- Aim for higher residential densities in order to make transit more sustainable – this can be done by creating transit nodes and increasing density close to transit stops.
- Increase transit convenience and accessibility through clear sight lines to stops, paths that avoid traffic and weather protected shelters.
- Implement education programs regarding the environmental, social and municipal costs of the automobile
- Encourage live/work spaces via zoning.
- Review City's vehicle procurement policy.
- Convert transit to run partially or wholly on bio-diesel.
- Upgrade City diesel fleet to bio-diesel and remaining vehicles to gas/electric hybrid.
- Implement program to collect grease waste from City's restaurants for use in city's diesel fleet.
- Lobby Province to build truck by-pass around City.
- Make driving through the City harder for trucks - erect more stop lights/signs at required corners along Hwy 7/8, make Ontario Street narrower downtown by creating angled parking.
- Tie in all transit options – train, inter-city buses and local transit.
- Lobby Via Rail for increased service.
- Build business plan with communities along North Main Line to show that increased service is financially sustainable.

Best Bets For The City:

- Direct new commercial growth to City's core, north and west ends.
- Lower or waive development charges for infill development.
- Reduce parking requirements for infill development in downtown and heritage areas as defined in the Official Plan.
- Lower or waive development charges for downtown residential development.
- Implement recommendations of Bicycle Advisory Committee. Include paths in City's secondary plans for annexed lands.
- Lower residential set-backs and increase set-backs for garages in City's Zoning Bylaw.
- Revive "Block Parent" program.
- Encourage more parking on local and collector streets to slow traffic down.
- Plant treed medians on arterials to make more appealing while reaping environmental rewards.
- Offer free transit passes for City employees and/or reduced rates for downtown merchants/employees.
- Construct new terminal that makes transit more appealing.
- Establish firm Urban Growth Boundary for the City.
- Promote "Leave your car at home day" in the City in conjunction with an education program.
- Expand "Walk-A-Block" to school program with Board of Education.
- Begin a fuel mixture of diesel and bio-diesel for transit buses.
- Enact by-law banning use of engine brakes within the City.

Things you can do at home..

- Drive smarter and less; fast starts and hard braking only reduce the average hour long trip by 2.5 minutes, but they consume 39% more fuel and produce up to five times more emissions.
- Limit use of air conditioning, as it can increase fuel consumption by up to 20%.
- Use gasoline with 10% ethanol.
- When filling your vehicle with gas, don't restart the pump when it stops for the first time as spillage is a major source of ground-level ozone (smog).
- Drive your vehicle less by walking, cycling, carpooling and using public transit. When you drive, plan ahead and get all your stops done in one trip.
- Maintain your vehicle - a poorly maintained vehicle uses up to 50% more fuel and results in 50% more emissions than a properly maintained vehicle - an under-inflated tire can result in 3% more fuel use.
- Buy a more efficient vehicle - a vehicle that is 25% more fuel efficient will reduce your greenhouse gas emissions and save you \$360 on an annual fuel bill of \$1440 - check out <http://oee.nrcan.gc.ca/vehicles/home.cfm> to see the most efficient vehicles if you're buying a used car visit <http://oee.nrcan.gc.ca/vehicles/home.cfm> to see the fuel efficiency of the model.
- Stop Idling - Turn-off your car when you stop to pick-up somebody or something - restarting your engine uses less fuel than 10 seconds of idling and pollutes less.
- Food in North America travels an average of 2,500 to 4,000 kilometres from farm to plate. Buying locally produced food or growing your own can reduce CO2 emissions.
- Take the One-Tonne Challenge.



South Shore Trail, Lake Victoria, Stratford



New City of Stratford Bus, 2004

FACTS:

Every litre of gasoline burned produces 2.4 kilograms of CO₂. Use your bike, walk, or take public transit whenever possible.

Number of tonnes of CO₂ produced by driving 20,000 km a year in a mid-sized SUV - 6 tonnes; in a mid-sized sedan - 4 tonnes; in a gasoline-electric hybrid - 2 tonnes.

Energy

While energy is essential to the operation of all facets of a municipality, it is also a major source of greenhouse gas emissions. Through new technologies, local generation and conservation, these impacts can be reduced.

Goals	Targets
Reduce energy use within the City.	Reduce energy load of municipally owned buildings by 20% within 5 years.
Switch to locally generated sources of energy.	Generate 10% of municipality's energy needs locally within 10 years.
Develop and implement a Clean Air Plan for the City of Stratford, including an education section directed at individuals, businesses and industry regarding "air friendly" activities. Reduce energy load of City's residential sector by 20% in 10 years.	Develop plan by 2006 and implement within 5 years.

Municipal Actions Required:

- Encourage construction of R2000 designated homes and use of passive solar energy.
- Encourage EnerGuide upgrades of City's existing residential stock.
- Streamline permit process for environmentally friendly developments and construction.
- Implement demand management strategy to reduce energy consumption.
- Construct new residential developments in grid format, which has been proven to reduce automobile dependence and increases walk-ability, thus reducing energy consumption.
- Increase building siting to gain 20-25% of energy via passive solar gain - encourage seasonal shading, solar orientation, thermal storage via building materials and double envelope construction.
- Shading parking areas and surface areas can reduce demand for cooling in summer months.
- Install smart meters in homes and businesses.
- Implement the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP) program and begin inventory of city's greenhouse gas emissions.
- Festival Hydro should participate in the encouragement of hydro conservation projects.
- Retrofit municipal buildings for energy efficiency.
- Buy green produced electricity for municipal operations.
- Outfit municipal buildings with energy generating and saving technologies, such as photovoltaic panels or solar hot water heating.
- Move towards using solar powered lighting for parking lots and streets.
- Move to smaller scale systems, such as wind, photovoltaic panels, micro-hydro generation, methane, industrial waste heat, ground source/geo-thermal heating and cooling, mini-turbines within storm and waste water systems.
- Direct 1-2% of Festival Hydro's profit towards the production of green energy in the area.
- Strike a committee of stakeholders to develop and implement a Clean Air Plan for the City.



Best Bets For The City:

- Lower or waive development charges for R2000 designated construction.
- Subsidize EnerGuide home inspections.
- Motion sensors on street lights - solar street/parking lot lights.
- Offer free trees for shading cooling units and homes through the Municipality.
- A comprehensive tree planting strategy.
- Adopt Partners for Climate Protection resolution and begin working towards five milestones.
- Mail out energy saving tips with monthly bills.
- Sign on to FCM's Municipal Building Retrofit Program - finance to complete project.

Things you can do at home...

- Trim house heating costs by up to 6% by lowering your thermostat by 3 degrees at night and when you're not at home. Leave your air conditioning turned a little warmer so it turns on less. Install a programmable thermostat that will automatically change the temperature at night or when you're not at home. Plant trees to shade your home.
- Turn off your water heater when on vacation and turn its regular heating temperature to 49 degrees Celsius to avoid scalds and save money year round.
- When you buy new appliances buy EnerStar models www.oeenrcan.gc.ca/appliances.
- Look for the EcoLogo on products www.environmentalchoice.com.
- An EnerGuide visit and upgrades can reduce your home's energy consumption by up to 25%, visit <http://oeenrcan.gc.ca/houses-maisons/english/choice.cfm?Text=N> for more information.
- Replace light bulbs with energy efficient bulbs - a 15-watt compact fluorescent bulb produces the same amount of light as a 60-watt incandescent bulb. If every Canadian home replaced just one 60-watt light bulb with a 15-watt compact fluorescent bulb in a heavy-use area, Canada would collectively save \$63 million annually in energy costs and reduce greenhouse gas emissions equivalent to taking 66,000 cars off the road.
- Building a new home? Building an eco-friendly home to the R2000 standard can reduce energy costs by 30% for a new home.
- Using nature to reduce energy-use - using a push mower to cut your lawn is a simple way to reduce greenhouse gas emissions and save money. Plant a tree to shade your air conditioner and reduce its energy load by up to half.
- Take the One-Tonne Challenge (www.climatechange.gc.ca)



Replace light bulbs with energy efficient bulbs

FACTS:

Money spent on energy is money that generally leaves the community. Money saved through energy efficiency stays within the local economy.

6.0 Recommendations

1. That the City of Stratford take the necessary steps to encourage the implementation of the goals, targets and local actions contained in this document regarding the City's water management, drinking water, natural environment, waste management, transportation and energy.

2. That the City of Stratford adopt an Environment First Policy and pass the following resolution:
"We the Council and the employees of the City of Stratford are committed to examining and assessing the potential environmental impacts of all of the Corporation's services and programs as a part of the decision-making process, and recommend appropriate actions that are achievable and within our jurisdictional authority in order to optimize environmental benefit."

3. That the City of Stratford adopt the Federation of Canadian Municipalities' statement of environmental policies and work towards completing the five milestones of Partners for Climate Protection.

4. That the City of Stratford set an example for its citizens by allocating resources to the implementation of this report by appointing an Environmental Coordinator whose function it will be to move the City's corporate activities toward environmental sustainability.

5. That the City of Stratford move toward ISO 14001 Certification as a way to provide leadership in environmental matters.

6. That the City of Stratford ensure the Roundtable on the Environment for the 21st Century remain a vibrant document that is reviewed for successes, and revise targets and goals every two years through the City's Energy & Environment Committee.

Appendix A: Where we are...

A Report Card on the 1993 Stratford Roundtable for the Environment

Waste Management

SHORT-TERM STRATEGIES FOR WASTE MANAGEMENT	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Deposit & return system.	A motion passed through Council requesting that the provincial government deposit/return commitment be further implemented within the Province. The original Provincial mandate of a 30% refillable system was restated in the motion. Council has endorsed a second motion from another municipality, which echoed this request for the LCBO.
The Blue Box Recycling Program needs to have some changes made. It will continue to be the most visible evidence of an individual householder's commitment to sustainability but will have to be streamlined to assure that it will be more efficient.	<p>Bi-Weekly collection implemented in 1996. Boxboard, plastic tubs and corrugated cardboard were added to the blue box program in 1996. The implementation of a User Pay or "Pay as you Waste" system was adopted in early 1997.</p> <p>Although the system is efficient, the costs have increased by over 200% based solely on the bid process and the acceptance of a new contract agreement for collection. System efficiency can continue to be reviewed. Contractor rates are fixed.</p> <p>Implementation of aerosol can recycling in April 2002.</p> <p>The implementation of the Pay as You Waste user pay system saw an increase in recycling by 61%. Today most boxes are placed out to capacity.</p>
All residents and businesses who produce recyclable materials should be provided with recycling services.	<p>From 1993 to 1996 the majority of apartments were placed on line with the collection system. The use of a 4-cart sort for these facilities allows residents to recycle base materials including cans, glass, newsprint and plastics. The recycling of boxboard and cardboard has proven to be more of a challenge at these locations as the carts do not lend themselves to this type of material collection.</p> <p>Five-stream recycling at apartments started in early 2002, with the addition of plastic container recycling into carts at some apartments.</p>
Make reduction and reuse the primary "R's".	Primarily a lobbying and educational effort.
An industrial/commercial/institutional steering committee should be formed to work with the municipalities within the watershed in reducing waste to the landfill. The committee would review possible alternatives for the disposal of specific materials as well as provide information for its membership regarding local solutions and examples.	Not initiated at this point. Use of Tip Fee as primary tool or disincentive which reduces ICI waste generation.

MID-TERM STRATEGIES FOR WASTE MANAGEMENT	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
<p>With 30% of the municipal waste stream compostable, a comprehensive organic collection and composting system should be implemented for municipal, commercial and industrial sectors.</p> <p>Food and yard wastes can be composted at home in either outdoor compost containers or indoor vermicomposters. Municipally subsidized programs encourage individuals to compost and provide the necessary training to do so. Other incentives may also be necessary to decrease the amount of garbage placed at the curb such as fees for excessive quantities or garbage bags could be implemented.</p> <p>Community composting systems may be needed for large volumes of yard wastes. Leaves can be collected and spread over farm fields as a natural fertilizer. A leaf collection pilot program has already been Initiated for the City of Stratford and proven very successful.</p>	<p>Not introduced to the community at this point. Such a system would typically follow a residential collection and composting program. Residential organics collection was offered to bidders in the last tender process and was not bid on. It is estimated that over 70% of the community has purchased a backyard composter. Surveys show that participation is high in terms of households composting with backyard units. Ongoing education and information on backyard composting is needed. Vermicomposting has not been adopted or offered in the City and needs to be reviewed as an option.</p> <p>All leaves and yard waste are diverted from disposal at the City landfill. These materials are composted in a modified windrow operation. The marketing and use of finished material continues to be a challenge as quantities of finished product increase.</p>
<p>The Household Hazardous Waste Program should be expanded to educate the user not to generate such materials. The use of material exchange and return to source options should be investigated. All levels of governments should be encouraged to restrict the use of certain substances currently available to the consumer.</p>	<p>The program was established in 1990, and primarily collects these materials. An exchange system is integrated but not well used. Collection frequency has increased to offer collection during two full weeks annually (May and Oct)</p>
<p>Source separation by laws and material ban by laws should be developed as such materials become readily recyclable or divertible. Such by laws would apply to both residential and industrial generators of waste.</p>	<p>Current by-law bans a variety of materials from disposal. All organics, recyclables and a variety of construction materials, tires etc. are diverted. Diversion options are in place for these materials. Local industry or the municipality provides them.</p> <p>Asphalt shingle diversion and recycling implemented in 2000.</p>
<p>Higher quality manufactured goods should be designed with recyclability in mind</p>	

LONG TERM VISION FOR WASTE MANAGEMENT	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
<p>All solid waste is to be composted or returned to the resource stream.</p>	
<p>No replacements of landfill sites will be necessary.</p>	

Energy

STRATEGIC PLANNING FOR ENERGY-SHORT TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Identify and switch to more environmentally friendly energy sources where feasible such as the conversion of space heating and water heating away from electricity and towards more efficient alternate energy forms.	Growing use of natural gas and propane for space heating & vehicles.
Energy suppliers, perhaps in cooperation with private initiatives, should make available incentive programs to encourage the switching to more efficient appliances and lighting.	Private sector has made significant progress. Legislation/incentives.
Encourage intensification, to result in more efficient energy use.	Official Plan has been updated to address intensification issues.
Adopt an incentive program to increase the use of public transit.	Ongoing.
Adopt an idling bylaw in the City.	Idling by-law adopted by Council, with enforcement commencing in 2002.
The Utilities should print conservation and efficiency information on energy bills.	Done.
Encourage federal and provincial ministries to increase funding of renewable energy technologies and research.	
Encourage federal and provincial legislation which will reinforce conservation and efficiency.	
Encourage ongoing "energywise" education supported by municipalities, utilities, boards of education and industries.	
Convert public vehicles to cleaner more efficient fuels (i.e. propane, natural gas, ethanol, etc.).	Police cars were converted but gasoline reinstated due to maintenance issues. City Committee established to look into alternate fuel for vehicles and appropriate vehicle types.

STRATEGIC PLANNING FOR ENERGY-MID TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Develop bicycle paths.	Recreational bike routes now mapped, mostly sharing quiet streets with other traffic. Erie St. Bike Path completed. Bike paths included in North East Secondary Plan.
Continue to upgrade local building bylaws to incorporate the latest energy conservation technology.	
Adopt mandatory energy auditing for all municipal facilities either institutional or private.	Energy audit completed and implemented. Street Smart Program.
Encourage environmentally friendly cogeneration of electricity moving toward self sufficiency, both in the urban and rural sectors.	

STRATEGIC PLANNING FOR ENERGY-LONG TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Encourage the home as a workplace.	Progress being made. Home occupations are allowed under local zoning by-laws in R2 & R3 zones. An office for the resident's use is permitted in any dwelling.
Encourage organic farming techniques as the best way to harness solar energy for food and fuel.	Agriculture in this area is becoming more energy efficient through the use of low tillage and reduced amount of pesticides, synthetic fertilizer.
Create an interactive, communicative system to replace a lot of today's need for commuting, shopping, delivery, etc.	Tremendous progress and growth in internet use of communications, shopping, banking, systems management etc.
Establish more community ownership/rental arrangements to reduce material and energy duplication of resources (i.e. rototillers, power tools).	
Plan so that the car becomes a recreational vehicle rather than a daily necessity.	
Encourage solar, wind and ground heat as energy sources where feasible.	
Encourage societal development of fusion.	
For maximum efficiency, ensure supply of energy matches need	

Agriculture

AGRICULTURE LAND USE-SHORT TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Encourage a diversity of farm activities and production.	
Encourage farmers to decrease or eliminate inputs of chemical fertilizers and pesticides.	
Encourage certified organic produce.	
Protect farmlands through legislation by all levels of government.	
Support initiatives for urban intensification.	NE Secondary Plan sets density target.

AGRICULTURE LAND USE-MID TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Develop and expand markets for locally produced and processed farm products.	
Encourage "on farm processing".	
Create or amend legislation to reflect the principles of sustainable agriculture.	
Support and recommend the development and implementation of legislation to reflect the principles of sustainable agriculture	
Encourage government support for farms in transition to sustainable agricultural practices.	
Sustainable agriculture must be economically feasible and desirable for farmers during the period of transition.	
Develop educational programs that encourage societal recognition of the fundamental importance of a sustainable and adequate food supply.	

AGRICULTURE LAND USE-LONG TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
The region's food needs should be met locally	
Preserve and increase plant, animal and microbial diversity and acknowledge their interdependence.	

Intensification

STRATEGIC PLANNING FOR INTENSIFICATION-SHORT TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Growth should be accommodated in existing built up areas with full services before being allowed to spread beyond the City's outer bounds, where feasible. Net expansion to urban boundaries should be a last alternative to accommodate growth.	All growth in the City has to be on full services, and the City is vigilant about watching developments on existing city boundaries. City must be notified of any zoning applications on boundaries.
Encourage infilling of vacant or under utilized land. It is recognized that previous land uses sometimes restrict future uses.	<p>Infilling severances occur regularly. The City is creating Community Improvements Plans under the Planning Act with various Building Upgrade Loan and Tax Increment financing programs within the Heritage Conservation District.</p> <p>The City is developing a Brownfield Strategy that proposes financial assistance for the development of contaminated lands.</p>
Research alternatives and progressive ideas on how to intensify while maintaining quality of life in studying other cities in North America and around the world.	CMHC Participation in the NE Secondary Plan

STRATEGIC PLANNING FOR INTENSIFICATION-MID-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Create policies to permit accessory apartments in large single family homes.	Accessory apartments permitted in all zoning areas except R1.
Redevelop at higher densities, especially near transit routes.	
Reduce, where appropriate, minimum lot frontages and setbacks and plan for more medium density areas.	Accomplished under current by-law. In some cases, minimum front yard setback requirements has been reduced from 7.5 to 4.5 metres, and rear yard to 6 metres, frontage to 10 metres. (BD)
Change present concept of zoning to a mixed land use concept. Current zoning can segregate land uses which can result in a necessity to travel further to business and facilities. A mixed-use concept makes the various aspects of life	Non-residential uses are permitted in R2 and R3 Zones, however, commercial trends tend to be moving in opposite directions (i.e. big stores, increased use of vehicles).

STRATEGIC PLANNING FOR INTENSIFICATION-LONG TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Encourage and develop concepts of community gardening on rooftops and community shared open space.	City has provided space for a community garden within the city.
Plan new development with the intent to link residences to employment opportunities and community services in the downtown core area	

Natural Areas

ITEMS NOTED IN 1993 REPORT INTRODUCTION	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
<p>The City owns all the land adjacent to the river banks within its boundary and has through its parks board made a number of additions that are meant to recognize the importance of the environment. These include:</p> <ul style="list-style-type: none"> • a natural area with nature trails within the City boundary • an arboretum designed for appreciation and education which will ultimately include all tree species indigenous to the area • a large new park is to be developed as a low maintenance semi natural park with numerous walking trails • a tree nursery to perpetuate species native to the immediate area • a woodchipping and composting program to make the operation self sufficient for topsoil needs in new developments within the park system • a policy of tree replacement that effectively has established a greater than seven to one ratio on replacement of old and dying trees with new ones 	<p>Arboretum created in 1980. Has been filled and expansion has occurred to north shore and Upper Queens Park (1990-2002). Eventually will include and encompass Meadowrue Gardens (area will become semi-natural park).</p> <p>T.J. Dolan Natural Area created with trails established (8 km.). Replanting of area (50 acres) 1992-2002.</p> <p>Ecological inventory of TJ Dolan Natural Area completed in 2001. One of the recommendations was to prepare a management plan for TJ Dolan Natural Area.</p> <p>Series of smaller parks have been created which will be semi-natural with walking trails wherever appropriate. Examples include: SERC site and pond (1999); Meadowrue (1999); Cooper Standard (2000); Greenwood Park (2003/04); Packham Road Complex, Kemp Crescent and Battershall Parks(2004); Devon St. Park (2005 planned) and Marsh Pond (2005 planned).</p> <p>Nursery was completed in 1990 and has been harvested twice in the last decade with some 800 trees planted out in natural and formal park areas. Re-stocked with seedlings and whips in 2001 with harvest date – 2005.</p> <p>6725 trees planted on all city streets and boulevards from 1988 – 2003 924 trees removed during same period Replacement ratio – 7.27 to 1</p> <p>Creation and adoption of an Urban Forestry Plan by Council,. Recommendations guide department in the management of our urban forest. City tree cutting policy adopted by Council in 2003.</p> <p>All woodchips created from tree removals and tree trimming are used in the creation and maintenance of trails in the T.J Dolan and other natural areas such as Meadowrue. Also used for mulching purposes around trees and in shrub beds.</p> <p>Leaves collected in the cemetery and park system are composted and used in flowerbeds as well as top dressing material for turf areas and the tree nursery. Composted leaves also obtained from public works operation as required.</p>

NATURAL AREAS ECOLOGICAL PROTECTION & WATER MANAGEMENT -SHORT-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
<p>Encourage resource management and planning on a watershed basis</p>	<p>City has completed a sub-watershed study for the Court drain, and will implement an amendment to fully incorporate this into the Official Plan.</p> <p>Recommendations can be implemented through future planning and development, landowner/community stream projects and agriculture land management opportunities. Court Drain SWS included benthic, fisheries, water quality and stream flow sampling and monitoring. Future monitoring as a result of the study recommendations continues.</p> <p>Preliminary evaluation of five dams has been completed in the Avon River watershed. Further study and remedial activity is planned for selected dams.</p> <p>Benthic samples have been collected and analyzed to evaluate stream health at a dozen sites on the Avon watershed. Samples are collected annually downstream from Stratford and near the mouth of the Avon River to monitor long-term trends. As part of the Provincial Water Quality Monitoring Network, monthly samples are also collected downstream of Stratford for chemical analysis by MOE.</p> <p>The Avon River Watershed Report Card grades the forest condition and surface water quality of the watershed, describes why conditions are good or bad, and provides a list of actions needed for improvement. It establishes a benchmark from which future changes can be tracked.</p> <p>O'Connor Commission Phase II recommendations: 1. Drinking water sources should be protected by developing watershed based source protection plans. Source protection plans should be required for all watersheds in Ontario. 2. The Ministry of the Environment should ensure that draft source protection plans are prepared through an inclusive process of local consultation. Where appropriate, this process should be managed by conservation authorities.</p>
<p>Increase co operation, co ordination and communication between government agencies, community groups and individual citizens to ensure effective use of both human and material resources when involved in specific projects or overall environmentally sustainable ideals.</p>	<p>Secondary plan development for land to be annexed is underway.</p> <p>Health Unit, MOE and water providers in Perth co-operated on the adverse results protocol.</p> <p>Stratford Groundwater Study was completed with Steering Committee including City of Stratford, MOE, Health Unit, Local industry, UTRCA, OMAF, County & Townships, County and City residents.</p> <p>Perth Groundwater Study was completed in 2003 with involvement of: Perth County, the City of Stratford, the Town of St. Marys, MOE, Health Unit, Local Industry, UTRCA, OMAF and residents.</p>

Encourage farmers to use environmentally friendly farm practices.	
Stream bank planting and naturalizing of roadsides to decrease the need of pesticide use should be supported through the development of municipal by laws.	
Increase co operation, co ordination and communication between government agencies, community groups and individual citizens to ensure effective use of both human and material resources when involved in specific projects or overall environmentally sustainable ideals.	<p>Secondary plan development for land to be annexed is underway.</p> <p>Health Unit, MOE and water providers in Perth co-operated on the adverse results protocol. Steering Committee for the Stratford Groundwater Study consisted of City of Stratford, MOE, Health Unit, Local industry, U.T.R.C.A., OMAFRA, County & Townships, County & City residents.</p> <p>Perth Groundwater Study Steering Committee members as above. WORDING Perth County/City of Stratford/Town of St. Marys Groundwater (2002) Steering Committee members as above.</p>
Proper installation and maintenance of septic systems is imperative	<p>The Building & Planning Department issues permits for septic systems. Septic systems must conform to the Ontario Building Code. Any new development within the City must be serviced, however, some existing septic systems may be inherited with annexed lands.</p> <p>O'Connor Phase II Recommendation: Septic systems shall be inspected as a condition for the transfer of a deed.</p>
Protect all remaining wetlands and encourage research and development of artificial wetlands for waste treatment.	
Promote the naturalization of municipal drains. Artificial channelling of watercourses should be prohibited.	
All environmentally sensitive and significant natural areas within the watershed, including woodlots, wetlands, linkages, corridors and meadows, must be identified, enhanced and protected.	No provincially or regionally significant woodlots exist within the City, however locally significant natural areas are being reviewed. UTRCA is completing a Natural Heritage Inventory.

<p>Improve herbicide/pesticide spraying techniques to maximize effectiveness and minimize negative impacts on the surrounding environment and population.</p>	<p>Biological inventory of the natural area between John Street and Lorne Avenue completed by UTRCA (2002).</p> <p>Naturalization Plan for 4.4 acre site at 703 Douro Street, including trails, wildflower meadows, wetland area, native trees and shrubs.</p> <p>The Avon River Watershed Report Card grades the forest condition and surface water quality of the watershed, describes why conditions are good or bad, and provides a list of actions needed for improvement. It establishes a benchmark from which future changes can be tracked.</p> <p>1995 – Reduction in spraying of herbicides from two applications per year to one on parklands including sport fields, picnic areas, passive recreational areas, formal parklands</p> <p>2000 – Formation of Ad Hoc Pesticide Use Committee to examine feasibility of eliminating traditional herbicide use on turf grass</p> <p>2001 – Elimination of the use of herbicides except on sport fields and some formal park areas (85% reduction in use of herbicides)</p> <p>2002-2003 – Alternative weed control measures study initiated.</p> <p>2003 – Lemon Aid Solution being tested to eliminate use of herbicides.</p> <p>2003 – Integrated Pesticide Management Committee established to review use on private property</p> <p>As a result of the recommended Best Management Practices within the Stratford Groundwater Study, all spraying of herbicide or pesticide has been stopped on property around municipal wells.</p>
<p>Woodlots must be protected.</p>	<p>Draft by-law being developed.</p>
<p>Upgrade storm water planning management to reduce urban pollution.</p>	<p>Required for new development – Stormwater Master Plan completed.</p>
<p>Water conservation should become the norm.</p>	<p>Water consumption over the last 10 years has dropped from 5,713,396 M3 in 1991 to 5,236,440 M3 in 2001 (9% decrease).</p> <p>Stratford was one of the pilot communities for the OCWA Water Conservation Program for schools.</p>

<p>Supply management organizations, such as the Public Utilities Commission, must work with decision makers at all levels of government to ensure protection of ground and surface water resources.</p>	<p>Stratford and Perth County Groundwater Studies completed. The recommendations of the Stratford Groundwater Study have been accepted by council and included in the City of Stratford Official Plan.</p> <p>The new Safe Drinking Water Act is before provincial legislature. Source water protection legislation is anticipated.</p> <p>Bill 81 (Nutrient Management Act) was passed in 2002. .</p>
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NATURAL AREAS ECOLOGICAL PROTECTION & WATER MANAGEMENT - MID-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
<p>Each farmland owner within the Avon River Watershed should be required to develop conservation farm plans with the assistance of recognized (qualified) planners.</p>	<p>Bill 81 (the Nutrient Management Act) requires nutrient management plans. The regulations are being phased in over the next few years.</p> <p>The Clean Water Project is a regional incentive program for landowners to improve water quality. The City of Stratford has provided funding support to this initiative.</p>
<p>Developers, planners, engineers and community decision makers must be encouraged to incorporate water quality preservation and enhancement strategies into plans for new development</p>	<p>The Stratford Groundwater Study recommendations have been incorporated in the Official Plan.</p>
<p>Support and encourage MISA (Municipal Industrial Strategy For Abatement).</p>	
<p>Identify and manage high environmental risk areas.</p>	<p>The Stratford Groundwater Study and the Perth/Stratford/St. Marys Groundwater Study both contain a contaminant sources inventory.</p>
<p>Encourage the reduction and elimination of potable water for non-essential uses.</p>	<p>The demand for water in Stratford has decreased by 9% over the last 10 years.</p>
<p>Municipalities should pressure for revision of the Drainage Act to take into account environmental sensitivity.</p>	<p>Drains classified using DFO Classification Criteria. Involved habitat assessment and confirmation of presence or absence of indicator species.</p>

NATURAL AREAS ECOLOGICAL PROTECTION & WATER MANAGEMENT - LONG TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Support an increase in forest cover.	Plantings of 50+ acres in the TJ Dolan Natural Area and the ongoing creation of semi- natural areas throughout Stratford is increasing forest cover towards levels recommended by MNR.
Strive towards sustainable farm management practices.	

Subdivision Planning

SUBDIVISION DEVELOPMENT SHORT-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Require a site inventory study of physical and biophysical attributes which determine the site suitability for development and identifies the following sensitive features to be protected by regulations or restrictions: <ul style="list-style-type: none"> • Site hydrology (subsurface and surface drainage) • Biophysical resource base (flora and fauna) • Physical resource base (soil and topography) 	Official Plan can require EIS.
Create an Environmental Advisory Committee to comment on new development proposals made up of qualified members of the general public.	
Encompass environmental concerns by requiring that multiunit development proposals or severances of more than two lots be accomplished only through plans of subdivision.	
Require that all agency approvals are in place prior to site stripping and preparation for development.	This is the case. Site stripping does not occur before approvals are in place.

SUBDIVISION DEVELOPMENT MID-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Create a Topsoil Preservation By-law as exists in Waterloo, Mississauga and Aurora, for the protection of valuable topsoil from site stripping and erosion.	
Increase the minimum number of dwellings per hectare for new development.	This has been happening. A new Zoning by-law has introduced two new R1 zones. New minimum frontage in R1(5) zone is 10 metres. A new smaller R2 zone has also been introduced. New development has a density target of 25 units per hectare.

SUBDIVISION DEVELOPMENT LONG-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Plan for self-contained neighbourhoods.	

Transportation

STRATEGIC PLANNING FOR TRANSPORTATION – SHORT TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Establish and respect a hierarchical street system (i.e. small local streets, collector and arterial roadways).	The Official Plan designates local, collector and arterial roads.
Encourage measures to improve automobile occupancy habits and the reduction of length and frequency of automobile trips (i.e. develop an easy method for car pooling such as advertising in local newspapers).	
Identify positions where telecommuting or working from home would be feasible to reduce the need for commuting by motor vehicles.	
Actively discourage motor vehicle use.	
Encourage the use of public transit.	Steering Committee established.
Provide incentives for the use of alternatives to automobiles.	
Recognize the increasing number of bicycle users in the City and provide for them amenities such as signed cycle routes, safe parking areas and warnings to motorists at appropriate places.	
Require bicycle facilities be part of all road construction and reconstruction projects wherever feasible.	
Ensure in all new subdivisions, development and redevelopment proposals that adequate provisions are made for bike/walkway links.	NE Secondary Plan.
Encourage bicycle use by allocating bicycles a fixed minimum share of the municipal transportation budget for services such as secure bicycle parking.	
Research opportunities to realize the above noted recommendations by looking at other urban examples which promote automobile alternatives (i.e. Amsterdam).	
Provide wide sidewalks with attractive lighting and benches that will promote a safe and lively streetscape that is pedestrian oriented	
Ensure that streets and buildings are accessible for wheelchairs, carriages and carts.	Accessibility Committee guidelines established.

STRATEGIC PLANNING FOR TRANSPORTATION – MID TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Develop a system of bike paths/walkways linking activity centres throughout the City and, where appropriate, do so in conjunction with the open space system.	Bicycle Plan established.
Plan for bicycle/public transit transfer by providing parking at transit stations and enabling carry on bicycle transportation wherever possible.	
Close certain streets to cars for bicycle and pedestrian use only and establish dedicated bicycle routes and trails.	
Establish police bicycle patrols to help ensure respect for cyclists' rights and responsibilities.	Police bicycle patrol established.
Provide incentives for businesses to provide secure bicycle parking and shower? Correct? facilities.	
Create a pedestrian and wheelchair accessible urban environment by identifying and eliminating barriers to continuous travel for wheelchairs and pedestrians.	Curb cuts improved annually.
Implement ongoing education programs regarding the environmental and social impact of the car and the cost to municipalities (full cost accounting).	

STRATEGIC PLANNING FOR TRANSPORTATION – LONG TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Promote automobiles as recreation vehicles only for urban dwellers.	
Designate the central business area as pedestrian-only.	
Promote the lowering of emissions as new technology comes on stream.	Use of low sulphur diesel since 1966 has lowered particle matter by almost 90%

Quality of Life and Community

QUALITY OF LIFE AND COMMUNITY - SHORT-TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Promote the Stratford downtown core as a community centre ensuring that all needs are accessible and available (stores, health care, recreational facilities, municipal and government offices). Malls built at the edges of the City draw people away from the downtown business core, disperse the community and can be less accessible in terms of public transportation.	The Community Improvement Plan is in place, with goals including the upgrading of downtown core, use of upper stories. The Commercial Needs Study has limited development in the east end, with attempts to orient commercial development to the west end (Huron St.) and Cooper Site. It is hoped this will allow more equity in the downtown core businesses.
Encourage and promote local artists and public participation in the theatres tosp increase a sense of community.	
Allow for easy accessibility to locally grown food (i.e. promote the Stratford Farmers' Market).	
Preserve heritage and historical sites and educate the community about these sites.	Heritage Conservation District, Community Improvement Plans, Heritage Designations, Municipal Heritage Committee (formerly LACAC) focus on this goal. There are also articles on heritage properties in the local papers.
Make pedestrian areas safe and people friendly.	

QUALITY OF LIFE AND COMMUNITY - MID TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Promote easy access to the core area for pedestrians and bicycles by creating bicycle routes either through paths, lanes along roadways or by prohibiting motor vehicles on designated roadways at specific times.	Bicycle Plan developed
Increase the number of patios, meeting places, community centres and the facilities and activities offered there in order to bring people together.	
Encourage inter generational community centres and apartments.	

QUALITY OF LIFE AND COMMUNITY - LONG TERM STRATEGIES	ACCOMPLISHMENTS REPORTED TO ROUNDTABLE
Plan new development by considering community interaction and reliance, transportation links and meeting places.	NE Secondary Plan incorporates a modified fused-grid design.

Appendix B – Public Input – June 10th, 2004 Public Meeting

ENERGY

- Planning-support for OPA 10 - disperse commercial services throughout the City as indicated in the Official Plan.
- Provide Motion sensors on street lights to limit time they are on
- Keep Street lights off during daylight
- Give out florescent bulbs or provide rate cut for their use
- Transportation improvements:
 - Since large buses are often empty, convert to small buses
 - Ban SUVs.
 - Design express routes for buses
 - Offer free transit
- Support local food products with recognizable signage in retail stores
- Provide public money for education on energy
- Encourage Festival Hydro to offer Smart Meters
- Festival Hydro should investigate the opportunity to buy green energy (propose that 1-2% of Festival Hydro profit go towards a green energy program)
- City should invest in tree planting that would reduce energy needs (such as shading)
- Local municipalities should combine to invest in wind/green energy
- Provide more recycle bins
- Eliminate diesel trucks from the downtown

NATURAL ENVIRONMENT

- City should reduce use of pesticides near the river
 - Find & use alternative sprays
 - When pesticides used, post signs to warn public
- Promote cutting of lawns no shorter than 3 inches to encourage storm water retention
- City should recommend a standard for woodlot density
- City should strive for the break-up of large pavement areas
- Builders should be encouraged to not clear all trees but rather leave as many as possible
- Roundtable report should include column describing the estimated costs to implement recommendations and identifying who will pay (Citizens are more willing to pay when they know what they are paying for and can see the benefits)
- Promote more articles in our local papers on environmental topics
- Encourage corporations and individuals to naturalize their properties
- Promote environmental awareness in all community activities
- City tree by-law should encourage homeowners to designate where a replacement could go rather than just pay to remove the tree
- Support youth in the implementation of environmental programs and it will spread to the entire community
- Seek and encourage all forms of community support



Photo: Bonnie Henderson

Energy Discussion Group, June 10, 2004



Photo: Bonnie Henderson

Natural Environment Discussion Group, June 10, 2004

WASTE MANAGEMENT

- Provide for 100% diversion of organics from the landfill
- Lower the price of a composter on certain days or provide them free
- Undertake educational programs on how to build composters
- Educate citizens that composting will not only save space in the landfill, but it is great stuff and there is never enough even now
- Include apartments in composting efforts
- Develop a program to use restaurant organic waste – provide them with information on private haulers
- Promote home curb pick up of waste rather than driving to the landfill as a better environmental option
- Upgrade tender requirements on trucks for waste hauling contractors (i.e.: garbage trucks should use bio-diesel)
- Develop special waste reduction programs for parks and special events (i.e. dragon boat races)
- Label gray bins at the river to clearly indicate (Recyclable) or make gray containers blue to be in keeping with recycle program.
- Position many more recycle containers throughout City especially in the core
- Position bins and notices at drive-outs from take-out restaurants for people to use
- Encourage take-out restaurants to use only recyclable packaging
- City should ban the use of Styrofoam
- Develop a recycling program which is more accessible for small business, especially for paper and cardboard
- Need for more information about waste reduction
- Communicate need for waste reduction to waste coordinators in Stratford industries
- Search for a better way of communicating issue to the citizens (i.e. articles in paper; a special column (Recycler of the Month) reporting the success stories of families and businesses; picture the person who has reduced their waste (friends will see them doing it):
- Make stores aware of the need to reduce packaging
- Benchmark our success and compare to other communities
- In the 2007 tender for recycling pick-up, add more items (i.e. tinfoil, plastic film)
- Provide money in City Budget for waste reduction
- Divert all wood from landfill site
- Establish a buying group to buy recycled paper for all City businesses
- Recycle gypsum at the landfill
- City staff must get out to high schools and union groups to develop community enthusiasm for reduction
- City should consider free newsletters to highlight best practices both for restaurants & homeowners
- Establish free curbside exchange of unwanted items – (Junk Week)
- Make Stratford the first community to be free of plastic shopping bags
- Encourage full understanding of the implications of diversion programs (e-waste) before starting program
- Undertake recycling pickup only with horse-drawn wagons
- Ensure good stewardship of Ontario Waste Reduction Programs (Currently the City applies such funds to offset the cost of the next landfill site).

DRINKING WATER

- Increase the number of hazardous waste days offered at the landfill
- Provide deposit for waste crankcase oil at landfill for individuals who do their own oil changes
- Complete an inventory of private wells in the City & County
- Educate public by making the information on their water bills more meaningful to the average person, thus providing individuals with a good understanding of how much water they use
- Consider financial implications of all these recommendations made to council, since someone has to pay for them
- Chlorine levels in water supply are too high; consider the issue of trihalomethanes
- Create a program to monitor the back flow
- Establish preventers on water systems in industry to prevent contamination of the water supply
- Promote the fact that the City of Stratford has good quality water
- Provide dates for the achievement of the Best Bets and other recommendations so that council has a deadline and something for which to strive
- Create a by-law that makes it mandatory to use low flush toilets and other water efficient fixtures in all new or renovated buildings
- Consider different water rates depending on the number of water efficient appliances and/or level of consumption (likely based mostly on an honour system although random audits could be considered)
- City should lead by example and use rain barrels to water flower beds, etc.
- Educate homeowners on which household products could be destructive to the quality of water and the environment
- Educate on proper use of rain barrels as it relates to the West Nile Virus – there is need for more positive input on West Nile to lessen concern about personal risk
- Plant perennials vs. annuals - seasonal plants for each stage of summer
- Promote creative thinking on ways to reduce water use

WATER MANAGEMENT

- Plant buffers along the watershed both in rural and urban areas
- Educate the public that water on lawns & streets often goes directly to the river, carrying salt and other harmful products as well as topsoil all of which affect water quality
- Should we not consider aeration of Lake Victoria to improve water quality
- City must lead the way for water management (i.e. we need studies to identify what is causing most pollution)
- Stratford must manage the water fowl on the river (cull or remove?)
- Must demonstrate the importance of the river to Stratford economy
- The health of Avon is a quality of life issue
- City should monitor and display to the public the actual quality of water in the river
- Need to alert tourist (signage in the tourist booth) to effort of improving water quality of the river
- Educate public on the need for buffers and retrofit older areas up to standards required in new areas
- Sewer by-pass being worked on
- Need information in all papers on what environmental actions are being taken in City
- North shore natural growth being worked on by the Avon River Ecological Association
- Education and involvement of ages in the community both in decision-making and remediation
- High schools are important to such efforts
- Yellow Fish Road program-boy scouts/girl guides, etc. (Note the Yellow Fish program is for all age groups)
- More public meetings needed to inform and educate citizens
- There are too many paved areas with water run off – seek alternatives to concrete/asphalt
- Establish a prototype subdivision with environmentally friendly features
- Provide incentives for developers to manage water more efficiently
- Retain separate budget items for environmental programs

TRANSPORTATION

- Amend by-law so that development occurs in core
- Expand core area parking limitation to encourage in-fill
- Reduce residential parking requirements
- Expand core designation as it pertains to parking requirement in order to encourage residential development
- Pay close attention and implement the Official Plan
- Promote easier transportation methods
- Implement bike paths throughout core and outside (for regular journeys such as going to get milk or getting to work)
- Implement recommendations of Bicycle Advisory Committee (Best Bet)
- Free bus pass for employees who work in core
- Promote a day to Car Pool to Work
- Educate the public on the connection between air pollution & smog, and idling (i.e. post signs at idling spots, provide bumper stickers)
- Enforce the anti-idling by-law without prejudice to include anyone (police as well)
- Reduce permitted idling time from 5 minutes to two minutes
- Publicize environmental citizen of the month (creates awareness)
- Benchmark the City with other communities
- City must set example in environmental leadership
- Review City's vehicle procurement policy
- Produce bio-diesel fuel from restaurants' organic waste
- Reduce student bus rates
- Educate tourism buses to discourage idling
- Offer tax break on the purchase of cars that use hybrid & alternate fuels
- Redeem bus pass in a taxi if buses not full
- Increase bus ridership
- Revamp current bus routes and develop express routes, with service to core & malls, and use fewer buses with express routes
- Offer free bus transportation on high smog days
- Increase bus routes on main streets (Huron, Ontario, Erie)
- Slow traffic on streets where bike paths are proposed
- Decrease bus costs by reducing the cost to ride
- Discourage the truck by-pass (city will become a ghost town-people will use truck route and miss the city altogether creating a lagging economy)
- Angle bus stops
- Build an attractive bus and intercity transit terminal in the core
- Establish a fleet of bikes for free use (tie into bike route)
- Link all transportation networks (Via Rail, bus, bike, etc.)
- Offer on demand busing (9 passenger vans)

- City plans should call for grid system for more connection between streets
- Offer collection points for transit
- Revive block parent type program for helping elderly and children feel more comfortable using transit system
- Promote walk a block to school program
- Encourage more on-street parking to promote slower traffic & safer environment
- Develop alternative fuels and energy sources - windmill to generator to hydrogen....
- Promote a treed median in core to discourage large trucks-will also serve to cool climate
- City should consider partnering with a car-share franchise in Stratford

ADDITIONAL IDEAS FROM OPEN DISCUSSION

- Put worms on pavement back on grass – promotes the environment
- Encourage every home with a free florescent bulb for front porch making Stratford a more welcoming community
- Reduce the number of diesel trucks going through City, and carcinogens emitted
- Create a clean air plan for the City
- Set a firm urban boundary
- Some great ideas but what is the Committee doing in next 6 months? Answer: Best Bets will get the ball rolling toward those goals and then proceed to local actions.
- Get the surrounding Townships on board
- Involve citizens by identify what each person can do – an action plan for each citizen
- Make environment the theme of the City's quality of life – improving it so that there is no need to escape to the cottage for better air, etc.

