

**SUSTAINABLE URBAN DEVELOPMENT IN CANADA:
FROM CONCEPT TO PRACTICE**

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M5S 1A1

VOLUME III: A COMPENDIUM OF INITIATIVES

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and Regional Research

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With research assistance from Claude Marchand and Gilbert Héroux
for Quebec case studies

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August 1992

On behalf of the Intergovernmental Committee on Urban and Regional Research (ICURR), we are pleased to present this report entitled *Sustainable Urban Development in Canada: From Concept to Practice* by Dr. Virginia Maclaren. The issue of urban sustainable development is one that is at the core of the Committee's research program. It is also an area of significant interest to many of ICURR's sponsors and, in particular, to the Canada Mortgage and Housing Corporation. Given the increasing importance of urban areas in this country and the merging commitment of many public agencies to promote environmental awareness, the issue of how to make our urban environment more sustainable is of significant urgency.

Until now most of the focus in the field has been on the large scale environmental/physical dimension of the question. ICURR's interest and the reason for its support of Dr. Maclaren's project is to bring to the forefront the urban dimension and the necessity to equip local officials with tools to better understand what they can do and how they can do it. ICURR intends to pursue its involvement in the field for some time to come.

ICURR would like to express its gratitude to the **Canadian Environmental Assessment Research Council** and to its executive secretary Patrice Leblanc for the support given in making translation of the report into French possible. Without this assistance, such a task would have been beyond ICURR's resources.

We also want to sincerely thank Dr. Virginia Maclaren for her commitment to seeing this report completed.

Michel Gauvin
Executive Director

Claude Marchand
Research Coordinator

Intergovernmental Committee on Urban and Regional Research



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BIOGRAPHICAL NOTE

Dr. Maclaren is an Associate Professor in the Department of Geography and the Graduate Programme in Planning at the University of Toronto. She teaches courses in environmental planning, urban waste management and decision making methods. She is also the coordinator of the Programme in Planning's environmental planning specialization, one of the four specialization areas offered by the Programme.

Virginia Maclaren was educated at Bishop's University in Lennoxville, Québec, at the University of Ottawa and at Cornell University in Ithaca, New York. In addition to her research interest in sustainable urban development, she has been involved in a number of studies on waste management issues and co-edited two books on environmental assessment. She is a former chair of the Environmental Organization's Caucus for Metropolitan Toronto's Solid Waste Environmental Assessment Plan (SWEAP), former co-chair of the City of Toronto Recycling Action Committee and past member of the City of Toronto's Cityplan'91 Task Force.

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INTRODUCTION

This volume provides information on the detailed responses by municipal officials to the Sustainable Urban Development questionnaire. All of the information on the initiatives comes from statements made by the interviewee(s) and from documents obtained during the interviews.

There are four sections for each city. The first section records interviews with the heads of departments. The next section presents results from interviews with city government offices or departmental units that have significant responsibilities for sustainable development initiatives or that are themselves initiatives (e.g. the establishment of an Environmental Management Unit). The third section consists of a description of city government committees external/public advisory committees with relevant sustainable development initiatives and the fourth section describes, in some detail, a selected number of initiatives which were felt to be particularly innovative or relevant for sustainable development. In the first through third sections, all those initiatives chosen for inclusion in section four have been highlighted in bold under the "Initiatives" sub-heading in the respective sections.



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VICTORIA

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Parks/Recreation Department

CONTACT PERSON:

John H. Plantinga, Director, Parks/Recreation Department, City of Victoria, 633 Pandora Ave., Victoria, British Columbia, V8W 1N8, (604) 361-0393

DEFINITION OF SUD:

Involves projects that are self-sustaining and can fund themselves.

INITIATIVES:

1. Leaf Composting
2. Integrated Pest Management
3. Ad hoc policy for environmental assessments of selected, major projects

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ORGANIZATIONAL UNIT:

1.2 Planning Department

CONTACT PERSON:

Len Vopnfjord, Director, Planning Department, City of Victoria, 1 Centennial Square, Victoria, British Columbia, V8W 1P6, (604) 361-0283.

DEFINITION OF SUD:

Any development that does not create a net deficit in environmental, social, or economic resources.

INITIATIVES:

1. Densification of urban neighbourhoods by allowing secondary suites in single family housing (implementation)

COMMENTS:

There is an anti-growth ethic in Victoria at the present time which means that new development is not favoured. The loss of heritage features in the City would not be tolerated. There is a strong conservation ethic in the community and there are also stringent preservation requirements in the City's zoning bylaws. The densification program has been successful to date.

=====

ORGANIZATIONAL UNIT:

1.3 Engineering Department

CONTACT PERSON:

John Sansom, City Engineer, Engineering Department, City of Victoria, 1 Centennial Square, Victoria, British Columbia, V8W 1P6, (604) 361-0293

DEFINITION OF SUD:

From an engineering point-of-view, it means the relationship between land development and the ability of the community to sustain its infrastructure at reasonable cost and a reasonable level of service. In a broader sense, it means the sustainability of the community as a whole.

INITIATIVES:

1. Provision of an abundance of on-street and public off-street parking (at less than market rates) to sustain retail focus of city centre while at the same time encouraging the use of public transit (implementation);
2. Beach water quality improvement program (including a public awareness campaign, improved street cleaning standards, an Animal Litter Bylaw, and diversion of summertime storm water flows away from beach) (implementation);
3. Require noise-generating industries to have buffers between adjacent residential areas (implementation).

COMMENTS:

The concept of sustainable development is somewhat difficult to apply to Victoria because the city has a mature infrastructure and traffic system which is in good condition. The sewer system has excess capacity and roads cannot be expanded readily because of land scarcity and because community sentiments are not in favour of additional growth. Most development in the city at the present time, and into the future, is in the form of redevelopment of old sites.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Leaf Composting

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Parks/Recreation

ORIGIN/MOTIVATION:

Since there is relatively little good quality top soil in the Victoria area, the compost can be useful as a soil conditioner for landscaping purposes.

CONTACT PERSON:

John H. Plantinga, Director, Parks/Recreation Department, City of Victoria, 633 Pandora Ave., Victoria, British Columbia, V8W 1N8, (604) 361-0393

DESCRIPTION:

A large vacuum truck collects leaves from roadsides throughout the city and delivers them to a central site.

PROBLEMS/SUCCESES:

Funding for the program has been a problem. Although the program is currently underway, no mechanized equipment is used during the composting process and, as a result, the composting process takes about 2 1/2 years. With mechanized equipment, it is anticipated that the composting process would be complete within one year. Because the composting process takes longer and because there are storage constraints, the city is not able to collect as much material for composting as it would like. With mechanized equipment, the Parks/Recreation Department has shown that it could produce composted leaf material at \$10/yard. This compares to future soil costs of \$40/yard. An application for funding for the equipment to the provincial government was unsuccessful.

INITIATIVE:

4.2 Integrated Pest Management

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Parks/Recreation Department

BUDGET:

\$26,000

COUNCIL APPROVAL DATE:

1990

ORIGIN/MOTIVATION:

The Director of the Parks/Recreation Department first raised the issue. He was subsequently requested by the city's Advisory Parks and Recreation Commission to examine present herbicide and pesticide practices and make recommendations on proposed future treatment practices.

CONTACT PERSON:

John H. Plantinga, Director, Parks/Recreation Department, City of Victoria, 633 Pandora Ave., Victoria, British Columbia, V8W 1N8, (604) 361-0393

DESCRIPTION:

The IPM program for weeds includes the following:

1. upgrading fertilization, watering and aeration programs on sports fields;
2. use weed and feed only as needed on new grass areas;
3. use downpon and roundup herbicides every 3 years or less, as needed;
4. discontinue the use of killex and other herbicide sprays containing 2,4-D, mecoprop and dicamba;
5. introduce a public awareness program educating the public in accepting some weeds and dandelions in City parks and boulevards.

The IPM program for insect control includes the following:

1. training Park staff to become more knowledgeable about plants, their characteristics, potential insect and disease problems, and areas of use;
2. immediately removing infected plants and using chemicals only on plants that are deemed to be economically beyond using labour maintenance procedures;
3. introducing new plant varieties and using them when existing plants have reached the end of their maturity and when renovating mature shrub beds.

PROBLEMS/SUCCESES:

One problem is that there has been no research on the large scale application of IPM. The research to date has been conducted in nurseries or in fairly small areas. Since Victoria's program was only initiated in 1990, it is too early to evaluate its performance.

DOCUMENTATION:

Memorandum from John Plantinga, Director of Parks and Recreation, to Colin Crisp, City Manager, June 4, 1990, **Pesticides/Herbicide Program.**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Planning Department

CONTACT PERSON:

Tom Fletcher, Director of Planning, Planning Department, City of Vancouver, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7440.

DEFINITION OF SUD:

The term implies a balanced, self-sustaining urban area that minimizes the use of resources by utilizing them in an efficient manner. The problem is that, from a municipal point-of-view, sustainable development may not be a viable concept. Large municipalities cannot balance local consumption and production. The concept may be more viable at a regional level.

INITIATIVES:

1. Interim process for dealing with soil contamination issues (implementation)
2. Bicycle storage and parkade requirements for new developments (implementation)
3. Relaxing zoning bylaw requirements to encourage working in the home (conceptual design)
4. Environmental checklist for zoning applications and neighbourhood plans (implementation)
5. Energy efficiency component to design competition for Southeast False Creek development (implementation)
6. Residential intensification program by means of increasing densities in existing neighbourhoods (implementation)
7. Policy for encouraging access by proximity rather than by transportation (conceptual design for Downtown South Neighbourhood)
8. Tree replacement bylaw (conceptual design)
9. Study to determine which areas in the City should be retained as industrial (underway)

COMMENTS:

Staff lack expertise in dealing with environmental issues. The department is planning to implement a training program in order to instruct staff members on the application of the environmental checklist. An informal focus group of staff members with environmental interests has been established within the department with the purpose of advising the department on current environmental issues.

VANCOUVER

- 6. Promoting car-pooling and bicycling among employees (implementation)
- 7. Improved building energy efficiency (implementation)

COMMENTS:

The Board of Parks and Recreation has a strong commitment to environmental protection and already has several environmental initiatives in place.

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ORGANIZATIONAL UNIT:

1.5 Engineering Department

CONTACT PERSON:

W.H. Curtis, City Engineer, City Hall, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7300.

DEFINITION OF SUD:

To have urban areas develop on the condition that they are sustainable environmentally. The greatest barrier to sustainable development is uncontrolled population growth. Urban areas that exceed 10 million in population are not sustainable. For example, at this level of population, there are limitations on the ability to provide environmentally-satisfactory transportation, water and waste disposal services.

INITIATIVES:

- 1. Solid waste reduction and recycling (implementation)
- 2. Bicycle storage and bicycle parkade requirements for new developments (implementation)
- 3. Transit improvements
- 4. Efficient street lighting program (implementation)
- 5. Comprehensive bicycle plan (completed)
- 6. Bicycle parking standards study (conceptual design)
- 7. Liquid waste management plan (some aspects already implemented)

COMMENTS:

Increasing the use of transit is not an easy goal to achieve. In 1976, the Greater Vancouver Regional District Livable Region Plan established a goal of 30% for the percentage of trips in GRVD that would be by transit. At that time, transit accounted for about 10% of all trips. Now, in 1991, after an increase in the transit budget from \$30 million/year to \$400 million/year, it has declined to about 9%.

Before investing in a project to improve environmental quality, investigations should be undertaken to determine if it is effective or whether there are other projects which might provide greater returns to the environment for the same level of investment. For example, much emphasis has been placed on the potential for bicycle transportation to alleviate air quality problems in the city, but there is no proof that this is the case. It may increase pollution. A bicycle on the road may hold up bus and other vehicular traffic and cause

those vehicles behind it to consume more gasoline, and emit more pollutants while waiting, than any possible emission reductions the bicycle could achieve.

Finally, the federal and provincial governments are enacting environmental legislation which requires significant expenditure by municipalities for compliance but municipalities are not being provided with additional funding from those levels of government to meet these requirements. Although the new demands are technically achievable, they are not economically sustainable. In order to meet water quality standards, Vancouver recently had to extend one of its sewage outfalls. In order to fund this project, the City had to divert a large proportion of the funds available for maintaining and improving its existing sewer system to this single outfall. This significantly reduced the City's ability to deal with City-wide environmental problems.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

2.1 Solid Waste Management

DATE ESTABLISHED:

1990

STAFF:

7

REPORTS TO:

Assistant City Engineer

CONTACT PERSON:

Jody L. Andrews, Solid Waste Management, Engineering Department, City Hall, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7992.

DESCRIPTION:

The unit was established in 1990 when it became apparent that a cohesive administrative structure was needed to deal with waste management issues. The unit is managed by a solid waste management engineer and consists of a recycling engineer, a recycling promotion coordinator, a compost-yard waste engineer, a systems analyst, a landfill technician and a receptionist/typist. Its mandate includes waste reduction, recycling and landfill management.

INITIATIVES:

Solid Waste Management currently has responsibility for the initiatives listed below, but some of the initiatives may have originated before the unit was formed. In 1990, these initiatives diverted 13.3% of the City's residential waste stream from landfill. The 1991 projections are for a 23.5% diversion rate. City Council has adopted a goal of diverting 50% of the residential waste stream from landfill as soon as possible.

1. Blue Box recycling of newspaper, cans, colour-sorted glass and rigid plastic containers (implementation)
2. Blue Box recycling of mixed paper and corrugated cardboard (conceptual design)
3. Apartment recycling (pilot project)
4. Residential curbside collection of leaves and street leaves collection program (implementation)
5. Home composting program (pilot project)
6. Establishment of a Compost Demonstration Garden for the city (implementation)
7. Compost Telephone Hotline (implementation)
8. Household hazardous waste days (implementation - in cooperation with Greater Vancouver Regional District)
9. Recycling depots (2) for telephone books, cans, glass, corrugated cardboard, newspaper, and mixed paper (implementation)
10. City Hall office paper recycling program (implementation)
11. Citizens' recycling advisory committee (conceptual design)
12. Office paper recycling brochure (conceptual design - prepared in cooperation with Board of Trade)
13. Mattress recycling (implementation) and tire recycling (conceptual design) at the City's landfill
14. CFC recovery program for refrigerators and freezers dropped off by residents at existing solid waste handling facilities (pilot project - funded by Greater Vancouver Regional District)
15. Methane recovery system at City's landfill (methane currently flared to reduce odour problems but feasibility study underway to investigate scrubbing and sale for energy use)

PROBLEMS/SUCSESSES:

Data collected from other cities prior to initiation of the Blue Box program in Vancouver did not seem to match with outcomes achieved in Vancouver. There were several technical surprises. For example, average cost estimates from other Blue Box programs underestimated Vancouver's costs and average participation rates were also lower than Vancouver's monthly participation rates of 80%-90%. The City had originally planned for 14 recycling trucks but eventually required 23 in order to satisfy unanticipated demands. Another problem with the Blue Box program is that many residents continue to place many materials in their Blue Boxes that are not currently recyclable but which are marked "recyclable" by the manufacturers. Finally, there is considerable pressure in the community to increase the number of materials collected in the Blue Box program but

lack of available markets (for mixed paper and corrugated cardboard) is a barrier to expansion.

DOCUMENTATION:

Vancouver Engineering Department (1990) **Summary of Vancouver Waste Reduction Initiatives, Updated to November 6, 1990.**

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ORGANIZATIONAL UNIT:

2.2 Special Office for the Environment

DATE ESTABLISHED:

1990

BUDGET:

\$140,000

STAFF:

3

ORIGIN/MOTIVATION:

The Office was established, at the Mayor's request, in response to a perceived need to ensure greater coordination and integration on environmental issues, to create a more visible profile for environmental issues and to promote environmental awareness throughout City government.

REPORTS TO:

City Manager

CONTACT PERSON:

Ted Droettboom, Deputy City Manager, City of Vancouver, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7628

FUNCTION/GOALS:

The six functions of the Office are as follows:^{ch}

1. Coordination of environmental initiatives across the City organization.
2. Construction and administration of a standardized procedure to assess the potential environmental consequences of existing and proposed City policies and programs and recommendation of changes as required.
3. Development, in cooperation with departments, of a long-range strategy for the environment, establishing general directions, setting priorities, and guiding City actions and investments.
4. Monitoring and preparation of annual reports on progress related to the City's strategy for the environment and recommendation of changes or new initiatives when needed.
5. Research of environmental literature and legislation to alert departments and Council to items which may require a change to City operations or policy.
6. Maintenance of contacts with other governments, agencies, and organizations involved in the environment.

INITIATIVES:

Office due to commence operations Spring, 1991.

PROBLEMS/SUCCESES:

Too early to say.

DOCUMENTATION:

Memorandum from City Manager to City Council, April 24, 1990, **Special Office for the Environment - City Manager's Office.**

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Community Environmental Grant Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Environmental Grant Staff Committee (Chaired by head of Solid Waste Management)

BUDGET:

\$250,000 (\$50,000 spent to date)

ORIGIN/MOTIVATION:

Request by Mayor.

CONTACT PERSON:

John Evans, Solid Waste Management, Engineering Department, City Hall, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7992.

Comité intergouvernemental de recherches urbaines et régionales **CIRUR**

DESCRIPTION:

All applications must fulfil the following criteria:

1. Groups sponsoring activities or programs must be private, non-profit, registered societies which are community based. Applicants must demonstrate financial need as well as managerial and environmental knowledge and ability.
2. Programs or projects must be directed to personal or group actions which restore or improve the environment.
3. Programs for funding consideration should not duplicate existing programs in the public or private sector.
4. Programs should be generally supportive of City policies with measurable physical environmental benefits accruing primarily to City residents.

5. Priority will be given to those proposals which require one-time funding or initial seed money and do not require on-going City financial commitments. Grants are intended to supplement existing efforts by defraying a portion of the current operating or program costs. The City will consider grants where the City is the sole contributor but preference will be given to supplement existing funding or volunteer efforts. Grants are not intended to redress accumulated debt or past operating deficits.

The average value of awards to date has been \$10,000. The main focus of the program has been on waste reduction initiatives.

DOCUMENTATION:

City of Vancouver (1991) **Environmental Grant Application**

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INITIATIVE:

4.2 Clouds of Change

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Various departments

BUDGET:

\$45,000 for report preparation

COUNCIL APPROVAL:

1990

ORIGIN/MOTIVATION:

The driving force for the initiative came from individual politicians and members of the community. Although Vancouver's air quality has improved over the last few years, it is still a high priority environmental issue. Vancouver is a major contributor to the region's air quality problems. Prevailing winds carry pollution from Vancouver down the Fraser River Valley and create serious air quality problems for the downwind municipalities. Air pollution levels in those municipalities have reached levels equivalent to those found in Los Angeles.

CONTACT PERSON:

Ted Droettboom, Deputy City Manager, City of Vancouver, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7628.

DESCRIPTION:

Vancouver City Council established a Task Force on Atmospheric Change to study the issues surrounding atmospheric change, gather public input, and recommend specific actions the City could take. The seven members of the Task Force were mostly self-selected. The City provided liaison staff and funds for a three person research staff for the Task Force. Public input to the Task Force's report included 45 written submissions and 43 oral presentations at public meetings. A final report was produced in June, 1990 and consisted of the following recommendations:

VANCOUVER

1. Initiate an air quality management agency for the Lower Fraser Valley.
2. Reduce 1988 carbon dioxide emissions in the City by 20% by the year 2005.
3. Phase out all uses of ozone depleting chemicals within the City by 1995.
4. Request the Greater Vancouver Regional District to use its influence to reduce levels of industrial sulphur dioxide emissions.
5. Urge the provincial and federal governments to take actions supportive of Vancouver's targets for carbon dioxide and CFC reduction.
6. Prepare a code for environmentally sound business practices which will govern all City operations, investments and purchases. Develop a procurement policy that balances environmental objectives with other municipal procurement objectives.
7. Enact a traffic management (trip reduction) bylaw.
8. Develop parking policies to favour high-occupancy vehicles.
9. Report on the potential for restricting certain roads to high-occupancy vehicles during rush hours. Monitor tailpipe emissions sensing programs in the City of Toronto and in the South Coast (California) Air Quality Management District.
10. Make access by proximity rather than access by transportation a central focus of the City's new city-wide plan.
11. Initiate road pricing to increase high-occupancy vehicle use and to fund public transit. Convert the bus fleet to alternative fuels and reduce transit fares.
12. Encourage telecommunications as an alternative to commuting.
13. Monitor annual emissions and report on public and private transportation subsidies.
14. Develop energy-efficient land use policies based on recommendations from the Federation of Canadian Municipalities.
15. Develop a planning and design process for energy-efficient developments in the False Creek area.
16. Prepare a bylaw banning the use, sale and manufacture of ozone depleting chemicals.
17. Investigate methods that the City could utilize to provide economic incentives to Vancouver businesses for conversion of processes from those using ozone depleting chemicals.
18. Accelerate construction of a methane gas collection system for the City's landfill.
19. Amend the Parking bylaw and the Zoning and Development bylaw to require bicycle parking, bicyclists' showers and locker facilities in all new developments. Implement the Vancouver Bicycle Plan in cooperation with the Bicycle Advisory Committee.
20. Continue to encourage residential intensification.
21. Amend existing bylaws and regulations in order to encourage work at home.
22. Require all local area planning programs to consider the objectives of reducing emissions of atmospheric pollutants.

23. Require, in all plans or rezoning reports prepared by the Planning Department, a statement describing how the proposal contributes to or detracts from the objective of reducing atmospheric pollution and review all such statements with the Special Office for the Environment.
24. Implement an energy conservation bylaw for commercial and multi-family construction and consider extending the bylaw to single-family construction. Report on the feasibility of a program to encourage infrared scanning for energy leakages in commercial and residential buildings. Request B.C. Hydro and B.C. Gas to invest in low-interest loan programs for commercial and residential energy conservation and request the provincial government to pass an Energy Efficiency Act for the energy efficiency of appliances.
25. Publish an annual report on the health effects of global and local atmospheric pollutants and on air quality in Vancouver and the Fraser Valley. Report on the regulation of wood burning in stoves, fireplaces and outdoors.
26. Urge the regional air quality management authority and the provincial government to introduce a regional vehicular carbon dioxide tax.
27. Prepare a plan for planting and maintenance of City forests in City parks and on City streets and for promoting and assisting planting of trees on private property. Subject to jurisdictional approval from the provincial government, pass a bylaw regulating the removal of or damage to trees on private property in the City.
28. Undertake an annual review of solid waste recycling and reduction programs for the purpose of identifying opportunities for expansion. Urge the federal and provincial governments to introduce stringent packaging standards and direct the Special Office for the Environment to assess these standards for the feasibility and desirability of a supplementary City bylaw. Report on the regulation of small incinerators such as those operated by universities and hospitals.
29. Shift away from fossil fuels for City vehicles. Accelerate conversion to energy conserving street lights. Develop programs to encourage bicycle, public transit and high-occupancy vehicle use by City employees and City Council members.
30. Direct the Special Office for the Environment to coordinate an annual report on progress on atmospheric change targets. Appoint an independent panel of experts and community representatives to review the annual report.
31. Direct the Engineering Department to monitor global warming trends and potential adaptive measures and report periodically on current scientific consensus and possible adaptation strategies.
32. Take a pro-active role in advocating environmentally responsible policies and actions at all government levels. Facilitate the development of policy and technology related to atmospheric change and energy efficiency. Share information and projects with other cities of the world.
33. Foster public awareness of the problems associated with atmospheric change and develop public awareness of local initiatives to reduce emissions of atmospheric pollutants.

VANCOUVER

All of the above recommendations were approved by City Council and City Departments will be reporting to Council in the summer of 1991 on progress achieved in implementing the recommendations. All departmental reports are to include a discussion of the costs of implementation (including social, health, and economic costs) and proposals to mitigate these costs for those with low and fixed incomes. Although several recommendations of the Task Force were modified prior to approval only the two following recommendations did not receive approval:

1. Investigation of an ecological incentive program which would implement a floor space incentive system for ecologically appropriate development.
2. Creation of a bylaw to implement energy efficient interior lighting standards for commercial buildings.

DOCUMENTATION:

City of Vancouver Task Force on Atmospheric Change (1990) Clouds of Change: Final Report of the City of Vancouver Task Force on Atmospheric Change, Volumes I and II.

INITIATIVE:

4.3 Interim environmental checklist for local area plans and rezoning reports

ADMINISTERED BY:

Planning Department

CURRENT STATUS:

Implementation

COUNCIL APPROVAL:

Not required

ORIGIN/MOTIVATION:

A recommendation from Clouds of Change that the Planning department:

1. Require in all plans or rezoning reports prepared by the department, a statement describing how the proposal contributes to or detracts from the objective of reducing atmospheric pollution.
2. Review all such statements with the Special Office for the Environment.
3. Work with the Special Office for the Environment and the Health Department to develop a comprehensive method for the assessment of atmospheric emissions impact and report back to Council.

CONTACT PERSON:

Tom Fletcher, Director of Planning, Planning Department, City of Vancouver, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7440.

DESCRIPTION:

Since the Special Office for the Environment has not yet been staffed, the Planning Department has developed interim guidelines to comply with the Clouds of Change recommendation. Most of the items on the checklist make reference to existing bylaws or guidelines. The checklist identifies the following requirements for local area plans and

rezoning reports:

1. Adequate parking space that should not significantly exceed the minimum Parking Bylaw requirements.
2. Proximity to a transit stop.
3. Good quality bicycle and pedestrian access (lighting, surface quality, safety, etc.).
4. Secure bicycle storage facilities.
5. Secure changing rooms and showers for bicyclists.
6. On-site amenities such as day-cares, lunch rooms, laundries, etc. to minimize the need for travel.
7. Proximity of work, residence, and shopping.
8. Higher density housing and development adjacent to shops, facilities, bus routes and other transit services.
9. Decentralization of commercial and community services into local district centres to reduce travel distances.
10. Decentralization of offices into suburban town centres.
11. Infilling of vacant land in built-up areas.
12. Protection and enhancement of water quality if there are any surface water and/or shoreline uses present on or nearby the site.
13. Remediation of slopes or any cut/fill processes on the site which may impact soil erosion or water runoff.
14. Elimination of runoff and drainage carrying toxic wastes.

Local area plans and rezonings which consider the following should be encouraged:

1. Minimizing emissions of hazardous wastes.
2. Cleaning up and safely disposing of contaminated soils from detrimental previous land uses.
3. Containing and safely disposing of wastes.
4. Facilitating the collection of reusable and recyclable materials.
5. Minimizing area of the site covered with impervious surfaces.
6. Maximizing surface area of the site covered with trees and shrubs.

Local area plans and rezonings which provide the following should be encouraged:

1. Energy conservation plans regarding wall thickness, insulation, and building materials.
2. Alternative forms of energy for heating, lighting and power such as solar energy.
3. Maximum solar energy opportunities that minimize shadows.

After referring to the checklist, rezonings will be classified as follows and summary explanations will be provided for the classification:

- a. Rezoning with little impact on atmospheric pollution.
- b. Rezoning which will help reduce atmospheric pollution.
- c. Rezoning which will marginally increase atmospheric pollution.
- d. Rezoning which will increase atmospheric pollution significantly.

PROBLEMS/SUCSESSES:

Too early to say since the interim guidelines only became effective in February, 1991.

DOCUMENTATION:

City of Vancouver Planning Department (1991) **Interim Environmental Checklist for Local Area Plans and Rezoning Reports.**

INITIATIVE:

4.4 Tree Provisions under the Zoning and Development By-law.

CURRENT STATUS:

Approved and enacted

ADMINISTERED BY:

Planning Department

BUDGET:

\$150,000/year

COUNCIL APPROVAL:

Approved March 14, 1991

Enacted April 9, 1991

STAFF:

3

ORIGIN/MOTIVATION:

Concern over the loss of mature trees from the development of private property, particularly when associated with redevelopment in single-family areas. The removal of mature trees in established neighbourhoods exacerbates the often negative impact upon existing residents of new, usually larger houses. Removal also raises other environmental considerations in the maintenance of the urban forest.

CONTACT PERSON:

Michael Von Hausen, Senior Landscape Architect, Planning Department, City of Vancouver, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7826.

GOALS/OBJECTIVES:

To reduce the loss of mature trees on private property.

DESCRIPTION:

The Vancouver Charter was amended by the provincial government in 1990 to allow the City to enact a bylaw that would require plans to be submitted, as a condition of the issuance of a development permit, illustrating:

1. existing trees over 8 inches in diameter, measured 3 feet above the ground, that may be affected by the proposed development; and
2. the location, species and calliper of replacement trees to be provided on-site, to the satisfaction of the Director of Planning.

Where no trees will be affected by the development or where there will be insufficient space on the site after development to locate replacement trees, the Director of Planning may exempt an applicant from these requirements. Newly appointed staff, consisting of a senior landscape architect and two landscape architectural technicians, will review the

submitted plans. The City may prohibit building use and occupancy until the replacement trees identified in the plan are in place. Building inspectors will enforce the requirements of the plan. Once the building has been occupied, further enforcement action would be initiated on a complaint basis. In support of the proposed bylaw provisions, the Planning Department will develop a public awareness and education program on the planting and maintenance of trees in cooperation with the Board of Parks and Recreation's Public Information Program that had previously been approved under the Street Tree Management Plan.

PROBLEMS/SUCCESES:

The Charter amendment does not provide the City with the authority to prevent the destruction or removal of trees on private property. It only enables the City to require their replacement. It is hoped that this requirement will indirectly encourage the retention of existing trees. Another weakness of the amendment is that it does not prohibit the removal of trees prior to the submission of a development permit application. In spite of these and other concerns, there was general support expressed for the intent of the proposed bylaw at public meetings and the civic commitment that it represents. It is viewed as a first step, albeit inadequate in some estimations, towards a sustainable urban forest in Vancouver.

DOCUMENTATION:

City Manager's report to City Council, December 11, 1990, **Managing Trees in the Development Process.**

City Manager's report to City Council, February 14, 1991, **Managing Trees in the Development Process: Communication Program and Public Information Meeting.**

Province of British Columbia (1990) **Vancouver Charter Amendment Act (No.2), 1990.**

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INITIATIVE:

4.5 Environmental comments in Board of Parks and Recreation Strategic Plan

ADMINISTERED BY:

Board of Parks and Recreation

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

The strategic plan in the first step in the Board's proposed corporate planning process.

COUNCIL APPROVAL:

Approved by the Board of Parks and Recreation in 1989. City Council is responsible for funding Parks and Recreation but not for approvals.

VANCOUVER

CONTACT PERSON:

Vic Kondrosky, General Manager, Board of Parks and Recreation, 2099 Beach Ave., Vancouver, British Columbia, V6G 1Z4, (604) 681-1141.

GOALS/OBJECTIVES:

Three goals in the strategy relating to sustainable urban development are:

1. To advocate the conservation and enhancement of Vancouver's urban landscape.
2. To advocate the protection and conservation of Vancouver's environment.
3. To provide an adequate supply of parks and to seek opportunities to make open space available for public use in all parts of the city.

DESCRIPTION:

Some of the specific policies in the strategy that are relevant for sustainable urban development include the following:

1. The Board will participate as advocates in issues that affect the livability of Vancouver's environment.
2. A review and assessment of environmental impact will be conducted for projects and programs undertaken by the Board.
3. The Board will introduce programs to influence the maintenance, care and visual quality of the landscape on private property.
4. A street tree management program, including a program to educate citizens on the value and benefits of preserving trees, will be established and maintained.
5. The participation and involvement of Vancouver citizens will be sought and encouraged in the planning and development of recreation facilities and park space.

DOCUMENTATION:

City of Vancouver Board of Parks and Recreation (no date) **Vision for the Future: The Strategic Plan of the Vancouver Board of Parks and Recreation.**

INITIATIVE:

4.6 Integrated Pest Management (IPM) Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Board of Parks and Recreation

STAFF:

1 full-time IPM coordinator

ORIGIN/MOTIVATION:

Public concern and Board concern over the need to reduce reliance on pesticides.

COUNCIL APPROVAL:

None required.

CONTACT PERSON:

Vic Kondrosky, General Manager, Board of Parks and Recreation, 2099 Beach Ave., Vancouver, British Columbia, V6G 1Z4, (604) 681-1141.

GOALS/OBJECTIVES:

1. The maintenance and improvement of facilities within the Board's jurisdiction.
2. To lessen the use of chemical pesticides.
3. To achieve these first two goals by the implementation of an Integrated Pest Management (IPM) program.

DESCRIPTION:

An IPM program consists of the best combination of cultural, biological, genetic and chemical methods for the most effective and economical control of pests. The City's pesticide use policy states that:

1. Pest control materials and activities should be the least hazardous to human health, least disruptive of natural controls, least toxic to non-targets, least damaging to the general environment, most likely to effect permanent pest reduction, easiest to carry out effectively, and most cost effective.
2. Physical/cultural and biological/genetic control methods shall receive priority consideration for solving any pest problem. Chemical control strategies shall be used only where a mix of other strategies is inadequate and the pest damage would cause loss.
3. Free public access facilities such as general lawn areas in playgrounds, picnic areas and non-playing field portions of parks, boulevard medians, street trees and wild areas, shall have no or minimal pesticide use, except where irreversible damage would result.
4. Maintenance of playing field surfaces, display areas, and those areas having controlled or no public access shall have use of registered pesticides.
5. Where chemical controls are required, those used shall be chosen on the basis of highest effectiveness and selectivity and least hazard to health and environment. Any chemical under review by Agriculture Canada for a health or environmental reason shall not be used.
6. Parks facilities shall be constantly monitored for pest problems.
7. Treatment methodologies and pest-resistant plant availabilities shall also be regularly monitored so that the Board will have a wider choice of safer and more economical alternatives than at present.

PROBLEMS/SUCSESSES:

IPM changes the surfaces of playing fields and makes them rougher. There have been some complaints about this. The policy is to administer pesticides on playing fields only if absolutely necessary.

DOCUMENTATION:

City of Vancouver Board of Parks and Recreation (1988) **Pesticide Use Policy and Integrated Pest Management Program.**

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INITIATIVE:

4.7 Interim process for dealing with soil contamination issues

ADMINISTERED BY:

Permits and Licenses and Planning Departments.

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

Several former industrial sites in the City have recently been freed for development. There is concern that the City and City staff could be held liable for any damages or clean-up costs arising from approval of development on a contaminated site. The issue of municipal liability for development approvals was highlighted during a recent case in Delta, British Columbia. A property owner approached the city about the possibility of soil problems on his site. No records of problems were found, but when the property owner attempted to build, he discovered that there were soil compactibility problems on the site. The property owner successfully sued Delta and the previous owner of the land for not providing information on the problem that had apparently been on file.

COUNCIL APPROVAL:

1990

CONTACT PERSON:

Doug Roberts, Supervisor, Industrial Waste Control Inspections, Permits and Licenses Department, City Hall, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7567.

Comité intergouvernemental de recherches
urbaines et régionales

CIRUR

GOALS/OBJECTIVES:

To establish an interim approvals procedure for rezonings, subdivision, or development or building permits for redevelopment of sites with suspected soil contamination. The approvals procedure will be revised once the Province introduces legislation to deal with the problem.

DESCRIPTION:

At present, Provincial regulations and standards governing soil contamination have been formally adopted only for the Pacific Place lands on the north shore of False Creek, though they are being applied by the Province elsewhere. The Province has recently released a discussion paper as a precursor to implementing legislation on contaminated sites. The City's process for contaminated sites is interim only because it is the City's contention that the Province should take on the role of setting soil contamination standards and regulations, reviewing and approving environmental assessments, and

reviewing and approving remediation plans. The technical complexity of the issue requires consistent standards and review best provided by the Province, with responsiveness to local needs achieved by delegation to regional offices of the Ministry of Environment or Health. The evaluation of health and environmental issues related to soil contamination is complex and difficult, and requires a variety of skills and knowledge which are not presently available within City staff and would be expensive to add. The City will likely have a major role in providing and maintaining information on potentially contaminated sites and will also likely have a major role in triggering when environmental assessments for soil contamination are required. The interim process currently in operation is as follows:

1. Development permit, building permit, and subdivision applications, in areas of the City suspected of possible contamination, and all applications to rezone are referred to Permits and Licenses (Industrial Waste Control) and to Health (Environmental Health) for review, and are referred to the Archives to determine past land uses.
2. The City refers applicants of sites occupied by uses that may have resulted in soil contamination to the Province's Waste Management Branch, who advise them of a need to undertake an environmental assessment.
3. Applicants retain consultants to prepare the assessment and recommend a remediation plan, if one is required. Issues which must be addressed in the assessment include the potential for migration of contamination off-site onto city property, the potential for groundwater contamination, and the impact of the contamination on streets, utilities and proposed park areas.
4. The assessment reports and remediation plans are reviewed by the Province and the City. Rezoning applications do not proceed to public hearing and subdivision plans are not approved until the Province advises that it is satisfied with the assessment and any remediation required, and City staff are satisfied that any particular City concerns have been addressed.
5. Once remediation is completed, or, if it is to be undertaken as part of the development, then rezoning and subdivision approvals are granted.

In the absence of provincial inspection and certification of site remediation, owners and developers will be required to retain consultants to certify that the remediation work has been successfully completed. Zonings of suspect sites, approved on the basis of consultants' reports, will carry a disclaimer that the City does not warrant or guarantee the suitability of the site for the proposed use. Subdivisions of suspect sites require a covenant placing notice of the problem on title.

The current policy identifies standards for 14 heavy metals, five other inorganics, nine monocyclic aromatic hydrocarbons (MAH's) and three phenolic compounds. There are also two types of soil contamination standards. Investigation standards are contaminant concentrations which, when exceeded, require detailed investigation to assess the extent of contamination and nature of any hazards. Remediation standards are contaminant concentrations which, when exceeded, require action to reduce exposure of humans or other receptors to contaminants. This action could include clean-up, containment, creation

of barriers, change in land use, or any other form of mitigation. There are three levels of contamination, A, B, and C, which are used as Investigation and Remediation standards:

1. Level A. This level represents approximate achievable analytical detection limits for organic compounds in soil, and natural background levels of metals and inorganics. For soils with constituents at or less than this level, the soils are considered uncontaminated. For residential land use, Level A is the Investigation standard. For soils containing contaminants at concentrations greater than Level A but less than Level B, the soil is considered slightly contaminated but remediation is not required.

2. Level B. This level is an intermediate value, approximately 5 to 10 times above Level A. For residential and recreational land use, this level is the Remediation standard, while for exclusive commercial or industrial land use it is the Investigation standard.

3. Level C. At this level, contamination of soil is significant. For exclusive commercial or industrial land use, Level C is the remediation standard. For soils containing contaminants exceeding this level, all uses of the land will be restricted pending the application of appropriate remedial measures which will reduce contaminant concentrations to levels less than Level C.

PROBLEMS/SUCSESSES:

1. The City has no explicit legislative authority to regulate soil contamination. Until legislation is passed, the Province does not have the legal authority to approve site assessments formally, or to certify a site as not needing remediation, or that the remediation proposed and consequently undertaken has rendered the site developable. In the interim, the Province is providing commentaries on the assessment reports prepared by consultants. These include advice on the adequacy of the assessments and suggestions as to appropriate remedial procedures.
2. Implementation of the policy imposes significant costs on the developer, directly through payment for consultants and indirectly through substantially increased processing time for applications. There is also significantly increased workload for staff reviewing the submissions of consultants and the comments of the Ministry. The Province is finding it difficult to keep up with the work load and is concerned that it may not be able to continue providing the commentaries and advice that the City is relying on to issue approvals.
3. There is some risk of liability to the City arising out of the selection of projects to refer to the Ministry, since it may be implied that sites not referred are uncontaminated. The historical data currently available on contaminated sites is partial at best and information regarding contamination is likely to require a major restructuring of current information systems.

DOCUMENTATION:

British Columbia Ministry of Environment Waste Management Program (1990) **British Columbia Standards for Managing Contamination at the Pacific Place Site.**

City Manager's report to City Council, January 12, 1990, **Soil Contamination.**

British Columbia Ministry of Environment (1991) **New Directions for Regulating Contaminated Sites: A Discussion Paper, January 1991.**

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INITIATIVE:

4.8 Policy for encouraging access by proximity rather than by transportation in Downtown South

ADMINISTERED BY:

Planning Department

ORIGIN/MOTIVATION:

The idea of transforming Downtown South (a neighbourhood in the Central Area) into a residential neighbourhood was first discussed in the early 1980's in the context of seeking ways to revitalize Granville Street. One of the conclusions from these discussions was that mixed housing/commercial developments were not working. There was no sense of a coherent residential neighbourhood. The initiative to rezone Downtown South for high density residential neighbourhoods also contributes to the implementation of goals in the draft Central Area Plan and recommendations of the City Task Force on Atmospheric Change. The draft Central Area Plan emphasizes more housing to add people and activity to the downtown and identifies the key tool for achieving more housing and livable housing as the creation of new residential neighbourhoods. The Central Area Plan also seeks a pattern of different densities in different areas to create a distinctive character and to serve a range of household types and lifestyles. The provision of housing opportunities in proximity to place of work and significant cultural amenities is compatible with the Clouds of Change report in that dependence on the private automobile as the primary mode of transportation will be reduced. The proposed land use regulations and guidelines provide for substantial greenery on the streets and against building walls.

COUNCIL APPROVAL:

Not yet approved

CURRENT STATUS:

Conceptual design

CONTACT PERSON:

Tom Fletcher, Director of Planning, Planning Department, City of Vancouver, 453 West 12th Ave., Vancouver, British Columbia, V5Y 1V4, (604) 873-7440.

GOALS/OBJECTIVES:

The goals of the Community Plan for Downtown South consist of the following:

1. Develop new housing capacity for Vancouver in the form of a new high density livable and environmentally conscious community with the appropriate supportive amenities.
2. Encourage a neighbourhood with social diversity where existing residents can remain.
3. Encourage the revitalization of Granville Street.
4. Provide retail and mixed office and housing developments in the appropriate areas.

DESCRIPTION:

About half of the policies described in the Community Plan deal with land use policy and density issues in five sub-areas of the community. The remaining policies include the following:

1. Establish a streetscape concept plan based on a horticultural theme including the following key components:
 - (a) an alternating double row of street trees for residential streets and mixed office and residential streets and a single row of trees for retail streets as a standard treatment;
 - (b) a public garden area against the building wall for residential streets and mixed office and residential streets, with a variety of landscaped treatments including formal urban gardens and seating areas;
 - (c) a distinct, coherent paving pattern and street furnishings;
2. Target the immediate acquisition of the equivalent of at least 1 block of park.
3. Target the acquisition of the equivalent of 2 acres of land in small land purchases to allow for the development of pocket or mini-parks.
4. Develop social concerns strategies based on the following principles: acknowledgement of diversity of urban lifestyle, protection of the low-income community, support for the healthy co-existence of the conventional and unconventional, preparation for migration of problems to other residential neighbourhoods, provision of adequate social and health services to meet the needs of existing and new residents.
5. Initiate committees which involve government and community representatives in proposing, implementing and monitoring the social concerns strategies.
6. Retain and upgrade the existing single room occupancy stock, with a first priority being to facilitate the provision of an adequate and targeted pool of housing stock for existing long-term Downtown South residents.

DOCUMENTATION:

City of Vancouver Planning Department (1991) Downtown South Community Plan, February 1991.

City of Vancouver Planning Department (1991) Draft Central Area Plan, Policy Report No.1: Goals for the Central Area and Land Use Policy Proposal, March 1991.

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ICURR Intergovernmental Committee on Urban
and Regional Research
Comité intergouvernemental de recherches
urbaines et régionales **CIRUR**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Environmental Health Division

CONTACT PERSON:

K. Johnston, Assistant Chief Public Health Inspector, Environmental Health Division, Corporation of the District of Burnaby, 6161 Deer Lake Ave., Burnaby, British Columbia, V5G 4A3, (604) 294-7390.

DEFINITION OF SUD:

Development considering the needs of the future. The term should be interpreted as ecologically sustainable development.

INITIATIVES:

1. CFC bylaw (implementation)
2. Water course bylaw (implementation)
3. Pesticide notification bylaw (implementation)
4. Household battery collection project (pilot project)
5. Requirement of EIS for expansion of petrochemical facilities

COMMENTS:

More than ever before, the public is aware of environmental problems and wants to become involved in resolving them.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 Environment and Waste Management Committee

DATE ESTABLISHED:

1988

ORIGIN/MOTIVATION:

Evolved out of the Waste Committee which was created to deal with Blue Box issues.

REPORTS TO:

Burnaby Council

BUDGET:

None

MEMBERSHIP:

5 aldermen, 3 citizens, and staff from Health (3), Planning (2), Parks and Recreation (1), Engineering (1), and Purchasing (1).

FUNCTION/GOALS:

The terms of reference for the Committee are as follows:

1. To provide policy and/or program recommendations to the Municipal Council on specific environmental and waste management issues referred to the Committee.
2. To provide, as required, recommendations to the Municipal Council in relation to the Municipality's environmental/waste management goals and objectives to ensure that they continue to meet the changing environmental, economic, and social needs of the community.
3. To provide, as required, recommendations to the Municipal Council concerning the adequacy of existing Municipal policies, bylaws, procedures and practices in relation to their compliance with the goals and objectives referred to above.
4. To assist the Municipal Council in fostering greater educational opportunities and public, corporate and government awareness within the Municipality, and the region as a whole, in relation to the protection, management, enjoyment and quality of the environment.
5. To provide the opportunity for Burnaby citizens to assist the Committee in meeting its terms of reference.

CONTACT PERSON:

Ernie Olson, Municipal Manager, District of Burnaby, 4949 Canada Way, Burnaby, British Columbia, V5G 1M2, (604) 294-7103.

PROBLEMS/SUCCESES:

The Committee has worked well to date providing a good forum for environmental issues to be discussed in depth prior to recommendations being forwarded to the Municipal Council. An administrative issue currently being examined concerns how best to provide funds in the annual operating budget which are required by the Committee in undertaking its mandate.

DOCUMENTATION:

Memorandum from the Municipal Clerk to the Chairman of the Environment and Waste Management Committee, June 29, 1988, Reports, Item No. 4(c), Environment and Waste Management Committee, 1988 June 27.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 State of the Environment Report (SOER)

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

Planning

BUDGET:

\$10,000 for outreach (reduced to \$5,000 during budget approval process)

ORIGIN/MOTIVATION:

The absence of a local or provincial framework for making environmental decisions at the municipal level. The idea for the initiative was proposed by a member of Council.

CONTACT PERSON:

Sarah Groves, Environmental Planner, Planning and Building Inspection, Corporation of the District of Burnaby, 4949 Canada Way, Burnaby, British Columbia, V5G 1M2, (604) 294-7297.

COUNCIL APPROVAL:

1990

GOALS/OBJECTIVES:

To provide a comprehensive framework for identifying and addressing environmental issues and concerns in the municipality.

DESCRIPTION:

Burnaby's SOER will go beyond the traditional SOER in that it will also include an environmental action plan for the municipality. It will be a companion document to Burnaby's Official Plan and will help inform revisions to the new Official Plan slated for 1992/93. The following principles are guiding development of the SOER:

1. development of a set of environmental goals and objectives for the Municipality;
2. integration of an environmental action plan into all Municipal decisions and activities;
3. commitment to ecologically sustainable development and a balance between the environment and the economy;
4. establishment and maintenance of baseline environmental data for monitoring environmental quality;
5. community participation in environmental decision-making and solving environmental problems.

The anticipated completion date for the SOER is Fall, 1991. Preparation of the SOER is following a three-stage process. Phase I of the process will identify community environmental issues and concerns and assemble information on current municipal policies and procedures. Phase II will define environmental goals and objectives. Phase III will develop an environmental action plan for Burnaby. As part of Phase I, three community workshops were held in October, 1990. Participants included private citizens, aldermen and municipal staff, and representatives from industry, business, community groups, service clubs and educational institutions. The Planning Department has also conducted a survey of all municipal employees asking them their opinions about environmental issues.

PROBLEMS/SUCCESES:

Too early to say.

DOCUMENTATION:

Planning Dept. (1990) Documentation of SOER Community Workshops, October 1990.

INITIATIVE:

CURRENT STATUS:

4.2 Creation of a position in Ecosystems/Environmental Planning Implemented

REPORTS TO:

Assistant Director of Planning

ORIGIN/MOTIVATION:

The idea for the position was proposed by one of Burnaby's aldermen who was a strong advocate of environmental issues.

CONTACT PERSON:

Sarah Groves, Environmental Planner, Planning and Building Inspection, Corporation of the District of Burnaby, 4949 Canada Way, Burnaby, British Columbia, V5G 1M2, (604) 294-7297.

COUNCIL APPROVAL:

1989

DESCRIPTION:

The ecosystems planner reports to the Assistant Director of Planning. The responsibilities of the position include the following:

1. Performing major ecosystem management assignments by identifying, analyzing and prioritizing issues through the application of ecosystem principles and related resource management concepts to ensure ecologically sustainable community development in the Municipality.

BURNABY

2. Assisting in the formulating, implementing, modifying and improving comprehensive long-range development plans for the Municipality from an ecosystem perspective.
3. Providing consultative, coordinating and/or leadership role in ecosystem/natural resource management associated with the implementation of the Municipality's environmental goals and initiatives; consults with a wide variety of internal and external contacts concerning ecosystem and resource management as it relates to matters such as community/area plans, rezoning, preliminary plan approvals, park planning and development, and roads and utility planning and construction.
4. Identifying deficiencies in data relating to the ecosystem; conducts field research and data collection and analysis; coordinates findings and input from other agencies and departments.
5. Preparing and conducting education/awareness lectures and seminars for business and community groups on ecosystem and resource management issues.

PROBLEMS/SUCCESES:

Establishing a balance between time allocated to short- and long-term issues is a problem in that demands are high for responses to short-term issues. Although the position resides in Planning, many of the responsibilities of the position cover all departments. The location of the position has not been a problem in Burnaby because there is excellent collegiality among departments.

DOCUMENTATION:

Class Specification No. 340, District of Burnaby, Ecosystem Planner, Prepared June, 1989.

INITIATIVE:

4.3 CFC bylaw

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Environmental Health Division

ORIGIN/MOTIVATION:

Burnaby was aware of the City of Toronto's CFC bylaw but felt that it was too broad and not within the municipality's mandate. Burnaby therefore restricted its bylaw to repair, maintenance and disposal operations only.

COUNCIL APPROVAL:

1990

GOALS/OBJECTIVES:

To regulate the repair, service, maintenance and disposal of refrigerators, air conditioning units and cooling systems containing chlorofluorocarbons and halons.

CONTACT PERSON:

Dipak Dattani, Supervisor, Environmental Control, Environmental Health Division, Corporation of the District of Burnaby, 6161 Deer Lake Ave., Burnaby, British Columbia, V5G 4A3, (604) 294-7390.

DESCRIPTION:

The provisions of the bylaw are as follows:

1. No person shall allow a chlorofluorocarbon or halon to be released into the atmosphere in the course of repairing, servicing, maintaining or disposing of any equipment that contains a chlorofluorocarbon or halon.
2. No person shall use chlorofluorocarbon or halon for testing any equipment.
3. The owner, operator or occupier of every facility for the repair, servicing, maintenance or disposal of equipment shall allow the Chief Public Health access to any equipment, and any appliances and devices used or intended to be used for the repair, servicing, maintenance or disposal of equipment and shall provide such assistance and such operational records as the Chief Public Health Inspector may require so as to enable the Chief Public Health Inspector to conduct tests to determine whether there has been compliance with this Bylaw.

Upon request, Burnaby staff provides curbside collection of old refrigerators or air conditioners. The CFC's are removed and some are recycled.

PROBLEMS/SUCCESES:

There have been no challenges to or complaints about the bylaw so far.

DOCUMENTATION:

Corporation of the District of Burnaby (1990) Burnaby CFC Bylaw 1990.

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INITIATIVE:

4.4 Household Battery Collection Project

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Health Department

STAFF:

28 staff hours for sorting

ORIGIN/MOTIVATION:

Part of the motivation for this initiative is to ensure that batteries are not in the waste stream that is sent to Burnaby's incinerator.

BURNABY**CONTACT PERSON:**

Dipak Dattani, Supervisor, Environmental Control, Environmental Health Division, Corporation of the District of Burnaby, 6161 Deer Lake Ave., Burnaby, British Columbia, V5G 4A3, (604) 294-7390.

DESCRIPTION:

There are 14 locations in Burnaby for collection of household batteries. The sites include shopping malls, a firehouse, a hospital, educational institutions, municipal buildings, and a sound store. Staff sort the batteries by hand into four types (alkaline, carbon-zinc, nickel-cadmium, and button). The reasons for sorting batteries include a request by the Worker's Compensation Board and the Ministry of Environment for minimizing hazard during storage, allowance for recycling of specific battery types for which there are established markets such as button batteries, and maintenance of a detailed record for future use. Pre-sorting of batteries by household residents at the depots has not been tried because it has not worked well elsewhere. Furthermore, participating merchants are reluctant to have four collection bins placed in their stores as they would occupy more space. The program also includes an educational campaign to encourage the use of rechargeable batteries and the purchase of batteries with a low mercury content.

PROBLEMS/SUCSESSES:

The program has been very well received by the public. The total weight of batteries collected had exceeded the anticipated annual amount by 20% after only 5 months. The collected batteries are currently being stored because there is no market for them. Battery manufacturers have indicated that there is no economical way to recycle carbon zinc or alkaline batteries. "Button" batteries have a good potential for recycling because of their high mercury and silver content. This program succeeds a curbside battery collection program which was operated by the Engineering Department. That program was discontinued because batteries were designated as Special Wastes under provincial regulations and because there were labour concerns over the handling of the batteries at curbside.

DOCUMENTATION:

Memorandum to the Environment and Waste Management Committee from the Acting Chief Public Health Inspector, November, 1990, **Household Battery Collection Project - Update.**

INITIATIVE:

4.5 Pesticide notification bylaw

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Health Department

ORIGIN/MOTIVATION:

Initiated by Health Department and Council. There was no federal or provincial legislation which required licensed pesticide applicators to give advance notification of pesticide applications.

CONTACT PERSON:

Dipak Dattani, Supervisor, Environmental Control, Environmental Health Division, Corporation of the District of Burnaby, 6161 Deer Lake Ave., Burnaby, British Columbia, V5G 4A3, (604) 294-7390.

DESCRIPTION:

The provisions of the bylaw include the following:

1. Anyone using a pesticide on public land or on the grounds of a multiple family dwelling or in the common areas within such a dwelling shall post a warning notice at least 72 hours before the pesticide is applied and shall keep the notice posted at least 72 hours after the pesticide is applied.
2. No person shall apply a pesticide in a dwelling unit in a multiple family dwelling unless the occupant of the unit has been notified in writing at least 72 hours prior to application.

DOCUMENTATION:

Corporation of the District of Burnaby (1990) **Burnaby Pesticide Notification Bylaw.**
Memorandum to the Municipal Manager from the Chief Public Health Inspector, December 13, 1989, **Proposed Pesticide Notification Bylaw.**

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INITIATIVE:

4.6 Watercourse bylaw

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Health Department

ORIGIN/MOTIVATION:

Water quality is an important issue in Burnaby because two lakes in the district have been deteriorating.

COUNCIL APPROVAL:

1988

CONTACT PERSON:

Dipak Dattani, Supervisor, Environmental Control, Environmental Health Division, Corporation of the District of Burnaby, 6161 Deer Lake Ave., Burnaby, British Columbia, V5G 4A3, (604) 294-7390.



BURNABY**DESCRIPTION:**

Contaminants subject to the bylaw include (a) pollution, waste and special waste as defined in the British Columbia Waste Management Act, (b) waterborne wastes derived from human and animal sources, and (c) water, liquids and substances having a temperature higher than 65 degrees Celsius. The provisions of the bylaw include the following:

1. No person shall (a) discharge or allow leakage of contaminants into a stream, creek, waterway, watercourse, waterworks, ditch, drain, sewer, storm sewer or the soil, or (b) foul obstruct or impede the flow of any stream, creek, waterway, watercourse, waterworks, ditch, drain, sewer or storm sewer, whether or not the same is situated on private property.
2. Every owner and occupier of property on which contaminants are used or stored shall install interceptors, catchbasins and containment barriers for safe storage of the contaminants.
3. Every owner and occupier of property who proposes to dispose of contaminants shall first submit a satisfactory disposal plan to the Chief Public Health Inspector.
4. Upon vacating property, the owner and occupier shall remove all contaminants and clean up and dispose of all contaminants and containers used for storage.
5. Every owner and occupier of property on which soil is being excavated shall install and maintain a sediment control pond, settling pond or retention pond.
6. Owners and occupiers who fail to comply with the bylaw shall pay all costs and expenses incurred by the Corporation of the District of Burnaby for restoration, facility installation or maintenance, and disposal.

DOCUMENTATION:

Corporation of the District of Burnaby (1988) **Burnaby Watercourse Bylaw 1988.**

INITIATIVE:

4.7 Environmental design guidelines for new developments.

ADMINISTERED BY:

Planning and Building Inspection

ORIGIN/MOTIVATION:

Most of the Municipality's environmental assessment activities have been indirect/direct responses to citizen expectations and pressure from a former alderman who was personally committed to raising environmental awareness in all municipal departments.

CONTACT PERSON:

Sarah Groves, Environmental Planner, Planning and Building Inspection, Corporation of the District of Burnaby, 4949 Canada Way, Burnaby, British Columbia, V5G 1M2, (604) 294-7297.

DESCRIPTION:

The municipality uses an ad hoc policy and does not have formal, comprehensive guidelines. The environmental design guidelines outlined below are for a proposed golf course development:

Water Quality. Whenever appropriate, permeable surfaces for walkways, terraced landscaping etc. should be used for the management of surface runoff. All parking lots and vehicle containment areas should be provided with oil interceptors or appropriate means for disposal/treatment of contaminated surface runoff. In maintenance and work yards, storage areas for fertilizers, de-icing salt, fuel and other chemicals and toxic materials should be designed to contain spills and prevent contaminated runoff from reaching watercourses. A system of containment and settling ponds should be used during construction to collect surface runoff and control erosion.

Vegetation and Wildlife. Existing riparian vegetation and wetland habitats, especially along watercourses, should be preserved and enhanced. Attention should be given to potential effects on riparian vegetation of changes to drainage patterns. Building design and surface treatments should avoid features that may provide nesting sites for nuisance species such as starlings, pigeons, house sparrows and swallows.

Environmental Building Design Considerations. Building siting, massing and other design features should contribute to energy conservation. Buildings should use energy, especially fossil fuels, efficiently. Lighting systems should utilize energy efficient fixtures and bulbs. Building design should include water conserving features. Building fixtures and finishes should be made of "environmentally friendly" materials. Recycling facilities should be provided in buildings. Facilities for bicyclists including secure bicycle storage, lockers and showers should be provided. Design of landscape features and selection of plant materials must be guided by Burnaby's policy of Integrated Pest Management which is committed to minimal use of chemical pesticides.

PROBLEMS/SUCCESES:

It is anticipated that the Municipality's State of the Environment Report will address the issues of environmental assessment activities and environmental design guidelines on a comprehensive basis and may develop a municipal-wide policy on environmental assessment of public and private projects undertaken in Burnaby.

DOCUMENTATION:

Paul Merrick Architects Ltd. (1991) **Site Planning Rationale: Riverway Golf Course, Clubhouse and Driving Range**, Preliminary report prepared for the Corporation of the District of Burnaby.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Department of Planning and Development

CONTACT PERSON:

Hans Arends, Manager, Strategic Planning Branch, Planning and Development Department, City of Edmonton, 10310-102 Avenue N.W., Edmonton, Alberta, T5J 2X6, (403) 428-3409.

DEFINITION OF SUD:

Gear development so that it has as little impact as possible on the productivity of resources and on the environment.

INITIATIVES:

1. **SUD components in General Municipal Plan (implementation)**
2. **River Valley Environmental Assessment process (implementation)**
3. Preservation of heritage buildings through the City's administration and financing of the "Policy to Encourage the Designation and Rehabilitation of Municipal Historic Resources in Edmonton" (implementation)
4. **Natural Areas Plan Study (conceptual design)**
5. **Area Structure Plan Environmental Assessment Process (implementation)**

COMMENTS:

In many cases, the benefits of an initiative are difficult to quantify or demonstrate and results may only be visible after many years. The Planning and Development Department had an Environmental Unit in the early 1980's, but it was discontinued due to staffing and budget cuts.

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ORGANIZATIONAL UNIT:

1.2 Public Works

CONTACT PERSON:

A.B. (Al) Maurer, General Manager and City Engineer, Public Works Department, City of Edmonton, 9803-102A Avenue, Edmonton, Alberta, T5J 3A3, (403) 428-4179.

DEFINITION OF SUD:

Self sufficiency in services provision.

INITIATIVES:

1. Establishment of an Office for the Environment (implementation)
2. Waste Reduction Program (implementation)
3. Energy Management Committee (implementation)
4. Integrated air transportation services (implementation)
5. Emphasis on public transit in transportation plan (implementation)

COMMENTS:

Many initiatives are long term projects whose success is sometimes difficult to measure. The City has been trying to take a leadership role in the community and set an example internally.

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ORGANIZATIONAL UNIT:

1.3 Community and Family Services

CONTACT PERSON:

John Lackey, General Manager, Community and Family Services, City of Edmonton, 7 Sir Winston Churchill Square, Edmonton, Alberta, T5J 2V4, (403) 496-5804.

DEFINITION OF SUD:

It is a holistic concept that includes a social services component. Healthy families and healthy communities are sustainable because they attract economic activity. The social and economic objectives of sustainable development are totally interdependent.

INITIATIVES:

1. Funding support for the Downtown Development Corporation (implementation)
2. Establishment of seven citizen's advisory committees in the department (implementation)
3. Publication of one-page bulletins, aimed at the business community, which promote the benefits of social support programs (implementation)

COMMENTS:

It is too early to say how successful the City will be in making the downtown sustainable. It is always difficult to keep the social agenda a priority when there are competing demands for funding from different levels of government.

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ORGANIZATIONAL UNIT:

1.4 Department of Parks and Recreation

CONTACT PERSON:

Bryce D. Card, Manager, Development Branch, Department of Parks and Recreation, City of Edmonton, Revillon Bldg., 10320-102 Avenue N.W., P.O. Box 2359, Edmonton, Alberta, T5J 2R7, (403) 496-4861.

DEFINITION OF SUD:

Not familiar with the specific term but the Department has been working with suitable urban development criteria for 10-15 years.

INITIATIVES:

1. Tree planting program and corporate tree management policy (implemented)
2. Neighbourhood cooperative park development program (implemented)
3. Naturalization program (continued development taking place)
4. Integrated pest management program (implemented)
5. Mosquito abatement program (implemented)
6. **River Valley Concept Plan (completed)**
7. Investigation of a Pesticide Right-to-Know policy and establishment of a 12 member Right-to-Know Task Force with representatives from City departments, the pesticide industry, the general public, environmental interest groups and the building management sector (implementation expected winter of 1991)

COMMENTS:

The Department and Corporate emphasis has shifted towards maintaining and adapting existing facilities to meet changing needs rather than constructing new facilities. For example, to accommodate changing needs and an aging population, steam rooms, whirlpools and weight rooms are added to a swimming pool to change the function of a pool to that of a "leisure centre". A constraint of many initiatives is affordability. The Department has increased the involvement of community groups in establishing environmental objectives, standards and stewardship and works to assure that all new and redevelopment projects are suitable for urban development. Environmental protection of open space and our river valley and ravine system is a high priority.

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ORGANIZATIONAL UNIT:

1.5 Transportation

CONTACT PERSON:

John Schnablegger, General Manager, Transportation, City of Edmonton, Century Place, 9803-102A Avenue, P.O. Box 2610, Edmonton, Alberta, T5J 3R5, (403) 428-5981.

DEFINITION OF SUD:

Development accompanied by basic infrastructure provision that attempts to mitigate potential environmental impacts as much as possible.

INITIATIVES:

- 1. Send effluent from snow storage to treatment facility rather than directly to water courses (implementation)
2. Program for promoting public transit and investing in LRT (implementation)
3. Comprehensive Bicycling Plan (conceptual design)
4. Noise Compatibility Plan for Edmonton Municipal Airport (implementation)
5. Drainage Master Plan (approved)

COMMENTS:

A goal of the Department is to increase the efficiency of the current system and promote facility management rather than facility expansion. A City must have the flexibility to adapt the delivery of its services to changing objectives and public concerns. For example, 10 years ago, rivers were a resource to be used but now they are a resource to be saved. The Department's initiatives to date in this area have been successful but still lag behind what the public is demanding.

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ORGANIZATIONAL UNIT:

1.6 Health Department

CONTACT PERSON:

Nancy Kotani, Director of Health Promotions, Health Department, Edmonton Board of Health, Suite 500, 10216 124th St., Edmonton, Alberta, T5N 4A3, (403) 482-1965.

DEFINITION OF SUD:

Perpetuation of the community in a healthy state that encompasses the economic, physical, social and cultural environments.

INITIATIVES:

1. Sponsored summer school to look at the relationship between human health and the environment (implementation)
2. Promotion of wellness in the workplace for small business (implementation)
3. "Heart-a-la-Carte" Program for restaurants (implementation)
4. Member of Healthy Cities Network
5. Establishment of health goals for Edmonton (conceptual design)
6. Promotion of community-based economic development in the inner city (implementation)
7. Promotion of multicultural access to health (implementation)
8. Coordination of community services with other communities (implementation)

COMMENTS:

The Board of Health is now much more aware of public scrutiny than it had been traditionally and is committed to looking at public health issues in a different way.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

2.1 Office of the Environment

DATE ESTABLISHED:

1990

BUDGET:

\$200,000

STAFF:

2

REPORTS TO:

City Engineer



ORIGIN/MOTIVATION:

An administrative response to dealing with environmental concerns.

CONTACT PERSON:

Ray Coutts, Senior Projects Manager (Energy and Environment), Public Works Department, City of Edmonton, 7th Floor, 9803-102A Avenue, Edmonton, Alberta, T5J 3A3, (403) 428-4930.

FUNCTION/GOALS:

1. Monitor environmental indicators
2. Provide centralized access to environmental information
3. Research various environmental issues and their implications
4. Coordinate and facilitate information exchanges and activities among City departments, other levels of government and the public

INITIATIVES:

1. Air Quality Plan (conceptual design)
2. Task Force on CFC's (under way)
3. Soil Contamination investigations (under way).

PROBLEMS/SUCCESES:

Once the submission of the Task Force on Environmental Concerns has submitted its report to Council, the duties of the Office may expand. The Office's experience with utilizing external environmental expertise from such sources as the University of Alberta and the Alberta Research Council has been very valuable.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

3.1 Task Force on Environmental Concerns

1990

ORIGIN/MOTIVATION:

The idea for the initiative was initially raised by the City Solicitor's Office which cited concern for the environment, concern over the City's possible liability exposure and the need to study the impact of environmental issues on the operation of City departments.

REPORTS TO:

City Council

MEMBERSHIP:

28 members drawn from the following offices and departments: City Solicitor's Office, City Clerk's Office, Edmonton Power, Fire Department, Finance, Parks and Recreation, Personnel, Public Works, Environmental Services, Computing Resources, Planning and Development, Transportation, Edmonton Telephone, Board of Health, Corporate Studies Office and Corporate Communications.

CONTACT PERSON:

Doug Woodward, Senior Consultant, Corporate Studies Office, City of Edmonton, 15th Floor, Centennial Bldg., 10015-103 Avenue, Edmonton, Alberta, T5J 0H1, (403) 428-3566.

DESCRIPTION:

The general purpose of the Task Force is to ensure that the City is acting as a good corporate citizen in terms of environmental matters. More specifically, the objectives of the Task Force are:

1. to identify the environmental concerns of City departments and the City as a Corporation;

2. to identify possible short-term and long-term solutions and strategies which address the environmental concerns and their financial requirements; and
3. to assign responsibilities to the appropriate department to respond to the short-term environmental concerns.

The Task Force developed and has already received Council endorsement for the following Corporate Mission Statement on the Environment: "The City of Edmonton is committed to conscientious and responsible environmental management, practices and stewardship in all aspects of its corporate activities." The City affirms the following principles as following from this mission statement:

1. the responsibility the City shares with the public, industry and other levels of government for environmental well being;
2. the responsibility the City has to demonstrate leadership as a municipal corporation in fostering responsible behaviour for the well being of the environment;
3. the responsibility the City has to include environmental matters as important criteria in its decision making process;
4. the responsibility the City has towards development that does not impair the well being of present and future generations;
5. the responsibility the City has to ensure compliance with all applicable environmental legislation and regulatory requirements; and
6. the responsibility the City has to ensure that environmental solutions are delivered in a practical and fiscally-responsible manner.

Some of the issue areas currently under study by the Task Force include: waste reduction, energy conservation, purchasing policy, employee incentives to encourage appropriate environmental behaviour, planning processes to reduce automobile usage and protect natural areas, air quality, operational standards and compliance with environmental legislation. The final report of the Task Force is expected in the summer of 1991. The final report will identify the full costs, benefits and implementation plans related to all of the Task Force's recommendations.

PROBLEMS/SUCCESSSES:

The Task Force has met six times since its creation and has had strong participation from virtually all areas of the corporation. The only problem has been finding time when all members of the Task Force are available for meetings.

DOCUMENTATION:

Report of the Environmental Task Force to City Council, March 12, 1991, **Environmental Task Force - Status Report.**

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ORGANIZATIONAL UNIT: DATE ESTABLISHED:
3.2 Energy Management Committee 1981

REPORTS TO: STAFF:
City Manager 1 Coordinator

MEMBERSHIP:
Consists of senior staff from the major departments.

CONTACT PERSON:
Mark Brostrom, Energy Conservation and Environmental Research Engineer (Energy and Environment), Public Works Department, City of Edmonton, 7th Flor, Century Plaza, 9803-102A Avenue, Edmonton, Alberta, T5J 3A3, (403) 428-3041.

FUNCTION/GOALS:
The Committee acts as a steering committee for the City's Energy Management Program and advises departments of corporate energy management requirements, coordinates energy management measures that are interdepartmental, assists departments with energy management initiatives, coordinates energy management training and education, and monitors progress towards achievement of the City's energy management goals. The City's Energy Management Coordinator serves as a liaison between the Energy Management Committee and departments, acts as a program and information source, and undertakes program initiatives at the request of the Energy Management Committee.

COMMENTS:
The City's Energy Management Program is currently under review. Development of city-wide standards for lighting are being investigated as well as life-cycle analysis, longer payback periods, etc.

DOCUMENTATION:
Report prepared by Real Estate and Supply Services, December 10, 1985, Energy Management.

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ORGANIZATIONAL UNIT:
3.3 Citizens' Advisory Committees for the Community and Family Services Department

CONTACT PERSON:
John Lackey, General Manager, Community and Family Services, City of Edmonton, 7 Sir Winston Churchill Square, Edmonton, Alberta, T5J 2V4, (403) 496-5804.

DESCRIPTION:

The Community and Family Services Department has seven citizens' advisory committees. These include committees for Disabled Persons, Children, Charitable Appeals, Community Mediation, Qualifications and Standards, and Aboriginal Urban Affairs. A general Community and Family Services Advisory Committee has also been established. This Committee consists of 11 members and includes representatives from the Edmonton Social Planning Council, the United Way, the Board of Health, and the general public. The purpose of the Committee is to provide leadership in the identification and amelioration of social problems in the City and to advise on the application and administration of the Family and Community Support Services Act. The Committee's advisory role encompasses the following areas:

1. plan formulation, program priorities and program funding for family and community support services;
2. funding of social service grant applications submitted to the City;
3. facilitating community involvement and volunteerism;
4. establishing new programs designed to prevent the emergence of social problems.

A recent initiative of this committee was publication of 12 bulletins informing the business community about some of the City's social needs, the services available to address those needs and the benefits of the City's social programs.

PROBLEMS/SUCCESSSES:

Citizen Advisory Committees are a real strength of the City. Their presence means that many initiatives come from the community itself and that the community has a stake in those initiatives. The Advisory Committees have had a good track record in terms of having their recommendations accepted by Council.

DOCUMENTATION:

City of Edmonton (1984) **A Bylaw to Establish a Social Services Advisory Committee.**

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 River Valley Environmental Assessment Process

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Planning and Development

ORIGIN/MOTIVATION:

Significant pressures to develop the river valley.

CONTACT PERSON:

Garth, Clyburn, Principal Planner, Land Use Planning Branch, Planning and Development, City of Edmonton, 2nd Floor, The Boardwalk, 10310-102 Avenue N.W., Edmonton, Alberta, T5J 2X6, (403) 428-4665.

DESCRIPTION:

The North Saskatchewan River Valley and Ravine system is protected through the North Saskatchewan River Valley Area Redevelopment Plan Bylaw which outlines policies and environmental impact assessment requirements in the river valley. The major goals of the Redevelopment Plan are:

1. to ensure preservation of the natural character and environment of the North Saskatchewan River Valley and its Ravine System;
2. to establish a public metropolitan recreation area;
3. to provide the opportunity for recreational, aesthetic and cultural activities in the Plan area; and
4. to ensure the retention and enhancement of the Rossdale and Cloverdale residential communities in the River Valley.

All proposals for development in the River Valley of major facilities that are publicly owned or developed on public lands are subject to an environmental impact screening assessment and a detailed site location study identifying costs, and social, environmental and institutional constraints which make a River Valley location essential. A major facility includes facilities which provide basic services, or community, educational, recreational and cultural services or involve natural resource development. Proposals for the upgrading of approved transportation and City utility corridors and attendant facilities are subject to an environmental impact screening assessment and identified adverse impacts must be eliminated, minimized or mitigated through design and landscaping measures. Development Officers may also require that applications for Discretionary Uses in the valley be subject to an environmental impact screening assessment. Guidelines in the Bylaw identify components (hydrology, geology/geomorphology, vegetation, soils, historical/archaeological sites, surrounding land use, and noise, odour and visual impacts) which must be included for review in the Environmental Impact Statement (EIS) and specify that the environmental costs and benefits associated with the development must be summarized. There is usually some pre-consultation between the proponent and Planning and Development before the proponent submits an EIS to the Department. The Planning and Development Department then circulates the development proposal and EIS to municipal and provincial agencies. Public comments are invited and the documents are revised. The proponent forwards the final report for approval, co-signed by Planning and Development if it is deemed satisfactory, to Executive Committee and then to Council. The proponent must describe how the public was notified and involved and include responses to public concerns in the report.

PROBLEMS/SUCCESSSES:

To date the process has worked well. There have been about 30 EIS's submitted to date of which about 5 were private proposals, mostly storm sewer outfalls associated with subdivisions. One private proposal was for the operation of a riverboat and construction of the riverboat company's landing facilities on the river. The only case in which serious public concerns were expressed about a proposal had the concerns resolved before the documentation was sent to Council. Since there is no appeal process beyond the decisions of Council, proponents have an incentive to ensure that all concerns are addressed before that stage.

DOCUMENTATION:

City of Edmonton (1985) **North Saskatchewan River Valley Area Redevelopment Plan, Bylaw No. 7188, February 1985.**

INITIATIVE:

4.2 River Valley Concept Plan

CURRENT STATUS:

Completed

ADMINISTERED BY:

Parks and Recreation

COUNCIL APPROVAL:

1990

ORIGIN/MOTIVATION:

In 1989, the provincial government announced Phase II of its Urban Parks Program and the eligibility of the City for up to \$15 million in grants over a 10 year period. The Plan was prepared in order to take advantage of this opportunity for funding.

CONTACT PERSON:

Bryce D. Card, Manager, Development Branch, Department of Parks and Recreation, City of Edmonton, Revillon Bldg., 10320-102 Avenue N.W., P.O. Box 2359, Edmonton, Alberta, T5J 2R7, (403) 428-8126.

Comité intergouvernemental de recherches
urbaines et régionales

CIRUR

DESCRIPTION:

The Plan proposes tripling the present urban park in the City's river valley and ravine system. It will cost approximately \$67 million and is based on the following Vision Statement:

"The North Saskatchewan River Valley and Ravine system is a **ribbon of green** running through the City of Edmonton. The natural features, wildlife, vegetation and cultural heritage of Edmonton will be conserved for present and future generations by management of these resources to prevent exploitation, destruction or neglect. Trails, paths and parks will tie Edmonton together providing a change from urban living and an opportunity for recreation in the tranquility of nature."

The Plan includes a Resource Management Plan, a general description of the kind of development proposed, a land acquisition strategy and recommends a financing strategy. It proposes to develop five major parks, to provide a continuous trail system through the valley and eventually to link the trail system with adjacent municipalities. The Plan will protect ravines which are the last access routes for wildlife into the City.

DOCUMENTATION:

City of Edmonton Parks and Recreation Department (1990) **Ribbon of Green: North Saskatchewan River Valley and Ravine System Concept Plan.**

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INITIATIVE:

4.3 Area Structure Plan Environmental Assessment Process

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Planning and Development

ORIGIN/MOTIVATION:

The impetus for the development of an Environmental Assessment process came from a policy of the 1980 General Municipal Plan. The relevant policy states that: "The City will adopt an ecologically sensitive planning approach and will require the preparation of environmental impact statements as input to the preparation, review and approval of plans for new suburban growth areas (Area Structure Plans), transportation corridors and utility or energy networks or corridors". The policy also calls for a study to establish guidelines and, where possible, measurement standards for environmental impact assessments and statements. This study was prepared for the Planning and Development Department's Environmental Unit in 1985. The Area Structure Plan Environmental Assessment process evolved out of this early work.

CONTACT PERSON:

Heather McRae, Senior Planner, Strategic Planning Branch, Planning and Development Department, City of Edmonton, 3rd Floor, The Boardwalk, 10310-102 Avenue N.W., Edmonton, Alberta, T5J 2X6, (403) 428-3108.

DESCRIPTION:

Edmonton's Terms of Reference for Area Structure Plans (ASP's) may require the inclusion of the following in an ASP:

1. Information on the natural environment of the area, soils, agricultural capability, topography, special features, natural drainage courses, ravine or river valley systems, extractive industries, land conservation areas and the like;
2. An assessment of the environmental impact of the proposed development on the natural environment and the manner in which the natural site characteristics will influence the development proposal; and

3. Development or design guidelines relating to the overall area or portions of it in regard to special treatment for environmentally sensitive areas, for conservation areas, for historic or archaeological preservation areas, for development adjacent to the ravine and river valley system and for special development areas.

PROBLEMS/SUCSESSES:

EIA's have only been required when the Planner thought it necessary. An exception is that EIA's are required for all development in the North Saskatchewan River Valley and Ravine System (as per the requirements of the North Saskatchewan river Valley Redevelopment Plan Bylaw). There has been a shift in departmental thinking and it is likely that EIA's will be required for all Area Structure Plans in the future. The Natural Area Plan Study will provide a foundation for future environmental assessment policy.

DOCUMENTATION:

City of Edmonton (1980) **City of Edmonton General Municipal Plan, Bylaw 6000, 1980.**

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INITIATIVE:

4.4 Planning For Natural Areas in Edmonton Study

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

Planning and Development Department

ORIGIN/MOTIVATION:

During the early 1980s the Planning and Development Department hired consultants to develop an Environmental Impact Assessment procedure for new suburban growth areas. One of the recommendations of the consultants was that an inventory of the City's ESAs should be undertaken before initiating an EIA procedure. A preliminary survey of sites was completed in 1986. Another motivation for the natural areas study is that it will fulfil one of the objectives of the 1990 General Municipal Plan which calls for the identification and retention of ESAs. In the absence of such a process, some ESAs have been lost in recent years.

CONTACT PERSON:

Heather McRae, Senior Planner, Strategic Planning Branch, Planning and Development Department, City of Edmonton, 3rd Floor, The Boardwalk, 10310-102 Avenue N.W., Edmonton, Alberta, T5J 2X6, (403) 428-3108.

DESCRIPTION:

The Natural Areas study identifies Edmonton's natural areas, suggests a classification system to identify environmentally sensitive areas, suggests natural area protection through an improved environmental impact assessment process and recommends protection of selected natural areas through development of a City Policy.

PROBLEMS/SUCSESSES:

The city has no control over development in natural areas which extend outside its boundaries. Regional coordination is required to resolve this problem.

INITIATIVE:

4.5 SUD Components in General Municipal Plan

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

Initiation of the preparation of a new General Municipal Plan began in 1986 with Council adoption of recommendations made by the "Mayor's Business Policy Task Force" which called for a review of the existing plan. The Task Force felt that the existing plan conveyed an overly rigid impression and its policies could not react to changing economic or market conditions.

CONTACT PERSON:

Hans Arends, Manager, Strategic Planning Branch, Planning and Development Department, City of Edmonton, 10310-102 Avenue N.W., Edmonton, Alberta, T5J 2X6, (403) 428-3409.

DESCRIPTION:

In the years between the release of the 1980 General Municipal Plan and the 1990 General Municipal Plan, the City's economy underwent a significant downturn. The 1990 Plan recognizes that the major issues facing the City in the future cannot be resolved by growth alone. The goal of the Plan is: "To provide in Edmonton an attractive, safe, dynamic, accessible and sustainable environment in which people can live, work, move, visit and play now and in the future". The Growth Strategy for achieving this goal has seven components. They are: revitalization of inner city neighbourhoods, management of suburban growth, provision of appropriate commercial and industrial land, strengthening of the Downtown, promotion of good urban design and civic beautification, protection of agriculture and the natural environment, and provision of efficient transportation and utility systems. Some of the policies in the Plan with direct relevance for sustainable urban development include the following:

1. Prepare an environmentally sensitive area study for the City to identify locally and regionally significant environmentally sensitive areas, classify such areas as to their importance and identify which areas should be protected.
2. Establish a process for undertaking impact assessments for proposals affecting environmentally sensitive areas.
3. Establish design and mitigating measures to preserve environmentally sensitive areas.
4. Encourage the continued development and maintenance of pedestrian and bicycle facilities.

EDMONTON

5. Identify deposits of sand and gravel having significant commercial potential during the preparation of area structure plans or development concept plans. Protect the deposits from urban encroachment, develop them in a manner compatible with adjacent uses and rehabilitate them in a safe, environmentally sensitive manner.
6. Encourage selective redevelopment and sensitive infilling to increase the amount of housing, especially family housing, in the inner city.
7. Encourage the development and appropriate integration of high density commercial and/or residential nodes at sites with appropriate locational characteristics including proximity to major activity centres, regional shopping centres, LRT stations and arterial road access.
8. Ensure that the preparation of Area Structure Plans or development concept plans is not undertaken in areas designated for agricultural use until the proponent can demonstrate such lands are needed for orderly and economic urban expansion.
9. Encourage pedestrian travel within the downtown through the continuing development of the pedestrian circulation system.
10. Utilize the concept of a "Healthy Community" in the implementation of urban design guidelines.
11. Require environmental impact assessments for proposals in the river valley and ravine systems affecting natural hazard or sensitive areas.
12. Ensure that developments within the City and outside its boundaries are consistent with protecting the North Saskatchewan River as Edmonton's sole source of drinking water.

DOCUMENTATION:

City of Edmonton Planning and Development Department (1990) **Edmonton General Municipal Plan, Bylaw 9076.**

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INITIATIVE:

4.6 Waste Reduction Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Environmental Services Department

ORIGIN/MOTIVATION:

The City started its search for a new landfill site in 1981 and this eventually led to strong public support for recycling as a means of diverting waste from landfill. The City has not yet found a new landfill site and its current landfill is due to reach capacity in mid-1993.

CONTACT PERSON:

Bonnie F. Kulak, Liaison Officer, Waste Management, Environmental Services, City of Edmonton, 2nd Floor, Century Place, 9803-102A Avenue, Edmonton, Alberta, T5J 3A3, (403) 496-5595.

DESCRIPTION:

The waste reduction program includes the following initiatives:

1. Blue Box curbside recycling of newspaper, magazines, glass, cans, small metal car parts, eavestroughs, short lengths of pipe and tubing, corrugated cardboard, box board, milk cartons, brown paper bags, plastic containers and bags (implementation)
2. Apartment recycling (pilot project for 3,000 units)
3. Schools recycling for all blue box materials plus fine paper (pilot project)
4. Composting Plant for residential waste (conceptual design)
5. Mechanical Separation Plant for commercial and residential waste that will recover recyclables and produce refuse-derived fuel as a by-product (conceptual design)
6. Curbside collection of Christmas trees (implementation)
7. Telephone book recycling at grocery stores and centralized depots (implementation)
8. Household hazardous waste days and paint exchange (implementation)
9. Subsidized office paper recycling program (implementation)
10. Commercial waste audit program (implementation - 6 auditors available)
11. Commercial recycling program for plastics and corrugated cardboard (implementation)
12. Promotion of alternate technologies and local recycling support industries within the private sector (implementation)
13. War on Waste Campaign (in cooperation with local businesses). The campaign focuses mostly on education but also includes a Master Composter Program, the establishment of composting demonstration sites and recycling depots, a waste audit of civic departments, and a home audit strategy (various stages)
14. \$65.00/tonne surcharge on tires disposed at landfill (implementation)
15. Promotion of better use of dry disposal sites with construction/demolition firms (implementation)
16. Waste reduction education campaign in schools (implementation)

PROBLEMS/SUCCESSSES:

The Blue Box program has had extremely high participation rates (about 92%). This has created some capacity problems and has caused the total cost paid to recycling contractors to increase beyond the amount initially expected. The City has a recycling contract with two different companies for its Blue Box program. One of the contractors is a non-profit agency and it receives a slightly higher fee per tonne than the other because of the additional social benefits it provides through the employment of severely employment-disadvantaged people. One disadvantage that the Edmonton program operates under in comparison to many other programs in the country is that there is no outside public or private funding available to support the program.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Calgary Economic Development Authority

CONTACT PERSON:

Bruce MacDonald, Executive Director, Calgary Economic Development Authority, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-1482.

DEFINITION OF SUD:

Not familiar with the term.

INITIATIVES:

- 1. **Environmental statements in Calgary's Economic Development Strategy (approved)**
- 2. Sponsorship of an environmental expo for industry, 1990 (implementation)

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ORGANIZATIONAL UNIT:

1.2 Finance and Transportation (responsible for Assessment, Tax and Licenses, Data Processing, Finance, Management Audit, and Transportation)

CONTACT PERSON:

Paul A. Dawson, Commissioner of Finance and Transportation, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-5635.

DEFINITION OF SUD:

The efficient and affordable provision of infrastructure in a municipality that will meet the needs of the community and the business sector.

INITIATIVES:

- 1. Creation of a joint municipal-industrial committee for the annual negotiation of the cost of development agreements (implementation)
- 2. Establishment of a long-range inter-departmental planning group to map out long and short term infrastructure needs (implementation)
- 3. Establishment of a joint-use committee with School Boards for development planning (implementation)
- 4. Provision of Para-Transit (down-sized vehicles) services in new communities before minimum ridership levels reached for full service provision (implementation)

COMMENTS:

Prior to the early 1980's, full efficiency was not achieved in Calgary because of development pressures. After the economic decline in 1982, there was increased awareness of the need to provide efficient infrastructure and this led to a more controlled approach to growth management. The challenge for infrastructure provision is one of balance. It is important that development not be inhibited, but there should be no undue costs for taxpayers. Calgary has been successful in balancing its infrastructure investment. The newest buzz word in the City is "empowerment". A significant problem in transportation planning has been the growth of development around road rights-of-way and the subsequent public opposition to road construction through established neighbourhoods. Empowerment is a major challenge that must be dealt with in order to achieve sustainable urban development in the transportation sector.

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ORGANIZATIONAL UNIT:

1.3 Calgary Board of Health

CONTACT PERSON:

Dr. B.R. Friesen, Medical Officer of Health, Calgary Board of Health, P.O. Box 4016, Station C, Calgary, Alberta, T2T 5T1, (403) 228-7532.

DEFINITION OF SUD:

An activity or undertaking which can occur without leading to depletion of the environment, including the human environment. Among other things, it implies a commitment to a balanced budget process so that the health services delivered to future generations are not compromised by the community's current consumption of resources. Sustainable development implies a commitment to monitoring the health of the community and to the encouragement of local self-reliance. The latter can be accomplished in the health field by skill development and advocacy for healthy environments to pass along health knowledge to the community.

INITIATIVES:

1. Community health monitoring program
2. Community health knowledge training program

PROBLEMS/SUCCESES:

The monitoring program has been effective in monitoring trends in vital statistics and infant health, but it has focused on a disease model rather than identifying wellness factors. There are no measures on the efficiency of resource utilization and no measure of how the community defines wellness. A problem with the community health knowledge training program is that funding from the provincial and federal levels has decreased and it is becoming more difficult to afford such a program.

COMMENTS:

There are many unanswered questions about the concept of sustainable development. How can we transfer the quality of life obtained in developed countries to developing countries in order to promote world sustainability. Does it imply a decrease in the quality of life here? We may have to rationalize the services, such as medical services, that we provide to the population and make tradeoffs between individually focused high-technology, high costs services, that have little impact on the health status of the population (such as heart transplant) and those which are focused on the broad population to protect and improve the communities health status (such as immunization).

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ORGANIZATIONAL UNIT:

1.4 Planning and Community Services (includes responsibilities for Emergency Medical Services, Land and Housing, Parks and Recreation, Planning and Building, and Social Services)

CONTACT PERSON:

Bob Holmes, Commissioner of Planning and Community Services, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-5636.

DEFINITION OF SUD:

A concept with a larger overall concern for the environment. It implies a reduction in the use of fuels and other environmentally sensitive materials with the objective of reusing and reducing as much as possible.

INITIATIVES:

1. Life cycle maintenance program for parks and recreation facilities (implementation)
2. Energy audits of parks and recreation facilities (implementation)
3. **Policy for Environmentally Sensitive Areas (implementation)**
4. Stoop and Scoop bylaw (implementation)
5. Conversion of transportation fleet to propane (implementation)
6. Light Rail Transit powered by electricity (implementation)
7. Major facility maintenance reviews for energy efficiency in newly acquired buildings (implementation)
8. Conversion of some City parks from "active" parks to naturalized parks (conceptual design)
9. Parks and Recreation Department co-sponsored a wildlife study in one of its parks with the Calgary Wildlife Trust (implementation)
10. Working closely with community organizations such as Clean Calgary, Calgary Beautification Foundation, Parks Foundation, and others to carry out community clean-ups and enhancement projects
11. **Adopt-a-Park Program (implementation)**

COMMENTS:

Calgary is sharing technical information on some of its programs and facilities with other municipalities through the Canadian Parks and Recreation Association.

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ORGANIZATIONAL UNIT:

1.5 Operations and Utilities (includes responsibilities for Engineering and Environmental Services, Electric System, Fire, Mechanical Services, and Purchasing and Stores)

CONTACT PERSON:

R. Lyle Ward, Commissioner of Operations and Utilities, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-5637.

DEFINITION OF SUD:

Finding a balance between development and environmental protection such that environmental quality does not deteriorate.

INITIATIVES:

1. Establishment of an Environmental Services Unit (implementation)
2. Odour control program for sewage treatment plants (implementation)
3. Sewage treatment plant expansion and nutrient removal (conceptual design)
4. Recycling program (various stages)
5. Experimenting with natural gas and methanol fuels (pilot project)
6. **Energy efficiency program (implementation)**
7. Asbestos removal program for City buildings (implementation)
8. Upgrading of sander fleet in order to reduce amount of salt distributed on City streets (implementation)
9. City-owned underground fuel storage tanks actively monitored for corrosion damage (implementation)
10. Round table on the Environment (under consideration)
11. **Water Conservation Program (implementation)**
12. **Waste Management Program (implementation)**
13. CFC Bylaw (conceptual design)

COMMENTS:

The community has been enthusiastic and accepting of the City's initiatives.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

2.1 Environmental Services Office

DATE ESTABLISHED:

1990

BUDGET:

\$131,000

STAFF:

2

REPORTS TO:

City Engineer

CONTACT PERSON:

David Reynolds, Environmental Services Coordinator, Engineering and Environmental Services Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-4699.

FUNCTION/GOALS:

1. Acts as a corporate focus for contact by outside groups related to the environment generally;
2. Has functional responsibility for environmental coordinators in other departments;
3. Coordinates the City of Calgary's response to environmental matters;
4. Develops information packages and reports to Commissioners and Council on matters involving the environment;
5. Has functional responsibility for the Environmental Products Committee;
6. Prepares an annual report to Council on corporate activity related to the environment and planning for the future.

INITIATIVES:

1. **Air Improvement Resolution**
2. Creation of a network for municipal environmental coordinators in Canada and hosting of the first meeting of that group.

COMMENTS:

Community organizations are very strong in Calgary and run several of the City's facilities, such as the zoo and Fort Calgary. There are several grassroots organizations in the community (e.g. Grassroots Calgary) that have been very successful.

DOCUMENTATION:

Report to Council by the Commissioner of the Department of Engineering, June 5, 1990, **Organizational Restructuring Proposed to Better Address Environmental Matters at the Municipal Level.**

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT: DATE ESTABLISHED:

3.1 Inter-departmental Environmental Committee

REPORTS TO:
City Engineer

CONTACT PERSON:
David Reynolds, Environmental Services Coordinator, Engineering and Environmental Services Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-4699.

MEMBERSHIP:
Representatives from all departments and chaired by Environmental Services Coordinator.

FUNCTION/GOALS:
To act as a communications network for exchanging ideas and information among departments.

INITIATIVES:
A Sub-committee was established to deal with the Mayor's Environmental Expo.

PROBLEMS/SUCSESSES:
Only one meeting has been held since the establishment of the committee and plans are to hold meetings about every two months.

DOCUMENTATION:
Report to Council by the Commissioner of the Department of Engineering, June 5, 1990, **Organizational Restructuring Proposed to Better Address Environmental Matters at the Municipal Level.**

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ORGANIZATIONAL UNIT: DATE ESTABLISHED:

3.2 Environmental Products Committee 1989

ORIGIN/MOTIVATION:
Establishment of a committee was recommended at an ACCESS (Association of Canadian Cities for Environmentally Sound Strategies) meeting in Toronto that was attended by the purchasing manager.

CONTACT PERSON:

O.K. (Otto) Pipke, Purchasing Manager, Purchasing and Stores Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-5540.

MEMBERSHIP:

10 representatives from City departments, the Mayor's Office, and Aldermen's Offices.

FUNCTION/GOALS:

To advise on an environmental purchasing policy for the City. On the recommendation of the Committee, the City has adopted a policy to require recycled products wherever they are available at a reasonable cost. The premium allowed for recycled paper is 10% of the cost of regular paper.

INITIATIVES:

1. Exotic hardwoods are not being used in City products in order to reduce the amount of destruction of the world's rain forests (implementation)
2. Used oil, batteries and antifreeze removed from City vehicles are being sent to local companies for recycling (implementation)
3. Tree trunks from felled trees are cut up into firewood and left for residents to gather for use in their homes (implementation)
4. Cartridges from photocopiers are returned to the vendor for recycling (implementation)
5. Kerosene for computer mapping equipment is returned to manufacturer for recycling (implementation)
6. Use of personal coffee/tea mugs is encouraged in all City offices (implementation)
7. Old City of Calgary hard hats are recycled (implementation)
8. Vehicle replacements have been accelerated, which has resulted in cleaner burning, more fuel efficient vehicles in the fleet (implementation)
9. Use of washable/recyclable linen towels in City Hall Complex washroom (pilot project)
10. Staged acquisition of double-sided photocopying machines (implementation)
11. PCB removal program for affected fluorescent lights (implementation)
12. Requested two local daily newspapers to become involved in a newspaper recycling program

PROBLEMS/SUCCESSSES

One problem in Western Canada is a lack of markets. Since there is no market for PET (polyethylene terephthalate) in Alberta, it has not been included in the City's recycling program. The Environmental Products Committee has had many different types of environmental issues referred to it since its inception. Now, with the establishment of the Environmental Services Office, the Committee has become a sub-committee of the Inter-departmental Environmental Committee and will likely restrict itself to purchasing decisions in the future.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Air Improvement Resolution (AIR Calgary)

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Engineering and Environmental Services Department

BUDGET:

None

ORIGIN/MOTIVATION:

The initiative was one of several programs devised for the Mayor's first Environment Week in 1990 and has been ongoing since then.

CONTACT PERSON:

David Reynolds, Environmental Services Coordinator, Engineering and Environmental Services Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-4699.

DESCRIPTION:

The program requests the cooperation of the residents of Calgary in leaving their car at home twice a month on weekdays and using alternative transportation. A number corresponding to the last number in a car's licence plate is publicized by the media indicating which car owners should leave their cars at home on a given day. The program is voluntary.

PROBLEMS/SUCSESSES:

The program has spawned other air quality improvement initiatives by the city. In March, 1991, the city launched a program to encourage car-pooling among city workers and city workers on car allowances to leave their cars at home. In addition to a publicity campaign, the car-pooling program includes such enticements as priority parking close to building entrances and possible contest draws. The program operates by issuing a permit to the owner of the car-pool vehicle every three months. The permit has to be signed by each worker using the car-pool vehicle. Those workers who received car allowance (parking and mileage) from the city to operate their own vehicles on city business are allowed to leave their cars at home on dates coinciding with the last number on their license plates. Formerly, they were required to have the vehicle available at the office every day.

The AIR Calgary program has encountered some difficulty in achieving high participation levels for a number of reasons. For instance, the city's urban form favours the use of the car and gasoline is cheap. Residents won't give up the convenience of their car easily. Another problem is that residents of Calgary do not seem to feel that air quality is poor enough to require such actions to improve it. The emphasis of the publicity program may

have to focus on the benefits of the program for global rather than local air quality, or new programs could be developed.

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INITIATIVE:
4.2 Environmental comments in reports to Council

CURRENT STATUS:
Implementation

ORIGIN/MOTIVATION:
A proposal by the Mayor

ADMINISTERED BY:
All departments

CONTACT PERSON:
David Reynolds, Environmental Services Coordinator, Engineering and Environmental Services Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-4699.

DESCRIPTION:
The purpose of the initiative is to alert City Council to the existence of environmental issues and the implications of measures needed to mitigate environmental damage. Each report to Council by a department must include a section addressing environmental concerns. Issues of major environmental concern should be referred to the Environmental Services Coordinator for comment before submission to Council.

PROBLEMS/SUCCESES:
An example of the operation of this process to date occurred during the preparation of a proposal for a new road in North Calgary. Residents adjacent to the road's right-of-way objected to the presence of a new road and the Environmental Services Coordinator suggested changes to the road's design to help mitigate some of the anticipated environmental impacts. These consisted of retaining walls and lower slope angles for the road bed.

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INITIATIVE:
4.3 Environmental statements in City Council's Strategic Plan

CURRENT STATUS:
Implementation

CONTACT PERSON:
Dale Stanbury, Manager of Management Services, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-5219.

DESCRIPTION:

The strategic plan is a document which presents Council's political agenda in written form. The strategy states that a guiding principle of its initiatives in the environmental area are to "... safeguard the environment for future generations, while presenting acceptable costs to today's taxpayers" [p.10, Charting Calgary's Future: Council's Strategic Plan]. The strategies envisaged include the following:

1. Establish an environmental agenda dealing with air and water quality, solid and hazardous waste management, use of natural resources and noise abatement;
2. Work with other governments to gain appropriate legislation and enact environmental programs;
3. Establish effective communication with regional jurisdictions and put in place programs that recognize the regional nature of environmental issues;
4. Establish joint venture initiatives with the private sector;
5. Collaborate efforts with the private sector, educational institutions, research authorities and other jurisdictions on environmental issues;
6. Include environmental comments on policy reports coming to Council;
7. Require environmental analysis for all applications pertaining to major subdivision, land use, development, transportation and engineering reviewed by the Calgary Planning Commission to Council;
8. Fund environmental controls through appropriate utility charges, where appropriate;
9. Purchase materials for The Corporation that are supportive of the city's environmental goals.

DOCUMENTATION:

City of Calgary (1990) **Charting Calgary's Future ...: Council's Strategic Plan.**

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INITIATIVE:

4.4 Energy Efficiency Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Engineering and Environmental Services

BUDGET:

\$2.5 million, 1980-87

ORIGIN/MOTIVATION:

The program started in the early 1980's in response to the energy crisis.

CONTACT PERSON:

W.B. (Bill) Johnson, Manager, Fleet and Facilities Division, Engineering and Environmental Services Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-2708.

CALGARY**DESCRIPTION:**

Up to 1987, about 75% of energy savings achieved by the program could be attributed to energy conservation efforts. The remainder were attributed to changes in building size or use, changes in production or service levels, and changes in minimum billing demand for electricity in smaller buildings. The total value of savings achieved between 1980 and 1987 was \$5.5 million. Some of the more recent initiatives of the program include the following:

1. Fuel conservation program for the City's fleet (implementation)
2. Majority of police fleet fuelled by propane as part of program to convert City fleet to alternative fuels (implementation)
3. Heat recovery from motors in City's water treatment plant (implementation)
4. Heat recovery from engine coolant and exhaust system at City's wastewater treatment plant (implementation)
5. Wastewater treatment plant burns digester gas to produce more than 50% of the plant's electrical needs (implementation)
6. LRT parking plug-ins are provided with electric power in rotating intervals (on 20 minutes, off 20 minutes) to minimize the amount of energy needed (implementation)
7. Conversion of some street lights to low energy lighting (implementation)
8. Anti-idling campaign for City vehicles (implementation)

PROBLEMS/SUCCESES:

Interest in the program dropped off in the mid 1980's as energy prices dropped, but the interest has now reappeared.

DOCUMENTATION:

City of Calgary (1987) **Energy Trends in City Buildings**, 2nd Edition.

INITIATIVE:

4.5 Water Conservation Program

CURRENT STATUS:

Implementati
on

ADMINISTERED BY:

Public Relations, Engineering and Environmental Services Department

BUDGET:

\$52,000

ORIGIN/MOTIVATION:

Concern over the water consumption problem among city administration during the early 1980's.

CONTACT PERSON:

Don Mitchell, Public Relations Coordinator, Engineering and Environmental Services Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-8050.

DESCRIPTION:

The objectives of this program are two-fold: (1) to inform the general public about methods for and the benefits of water conservation; and (2) to inform the general public about the benefits of water metering. The most recent publicity program launched by the city highlights the fact that nine of ten households have achieved economic savings (about \$45/year, on average) by switching from a flat rate charge for water consumption. Roughly 15% of those households living in single family residences or duplexes are already using water metres. In addition to the water meter campaign, the water conservation program spends a large portion of its budget on encouraging the public to reduce its water consumption during peak demand periods in the summer.

PROBLEMS/SUCCESES:

There have been three plebiscites in Calgary on the issue of universal water metering. The results from earlier plebiscites had been overwhelmingly against such a policy, but with the rise in concern over environmental quality, public attitudes are changing and, although the water metering plebiscite in the last election was defeated, only 67% were against the proposal.

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INITIATIVE:

4.6 Environmental Statements in Calgary's Economic Development Strategy

CURRENT STATUS:
Approved

BUDGET:
\$80,000 over 3 years

ADMINISTERED BY:
Corporate Resources Department and Calgary Economic Development Authority

ORIGIN/MOTIVATION:
Requested by the Calgary Economic Development Authority

CONTACT PERSON:
P. Anne Phelps, Research Assistant, Corporate Resources Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-1328

DESCRIPTION:

The significance of the environmental statements in Calgary's economic development strategy are that they acknowledge the City's recognition of the importance of the environment. No specific solutions have been offered at this point. The strategy was developed in consultation with almost 100 members of the Calgary business community who formed into Task Forces to deal with a number of different issues. Quality of life is one of 10 "challenges" identified in the document and within the quality of life section, the following strategies and sub-strategies with relevance to sustainable development were identified:

CALGARY

1. Encourage City Council and the Provincial Government to uphold high level pollution abatement and control standards.
 - a. Encourage the Provincial Government to lobby the Federal Government to tighten automobile emission controls;
 - b. Encourage governments to promote the use of "clean air" fuels (ethanol, natural gas, propane, etc.);
 - c. Ensure incoming industries are either environmentally neutral or follow strict pollution abatement procedures;
 - d. Encourage the private sector to develop environmental industries.
2. Promote expansion and enhancement of our cultural, heritage and arts activities.
3. Assist and encourage the various agencies involved in crime prevention, drug awareness and social services, etc.
4. Ensure that City Council and other approving authorities are fully aware of the importance to Calgary's economic well-being of maintaining and enhancing our quality of life.
 - a. Encourage the Planning and Building Department, Planning Commission, City Council and the Development Appeal Board to ensure development proposals are only approved when they meet high standards and enhance our quality of life.

PROBLEMS/SUCSESSES:

Task Forces which helped create the strategy have now identified methods for implementing the strategy document. Their recommendations are currently under discussion within the advisory group. One of the values of the process for developing this strategy has been helping interest groups see the links among different issues.

DOCUMENTATION:

Calgary Economic Development Authority (1988) **Calgary...Into the 21st Century: A Strategy for Economic Development.**

=====

INITIATIVE:

4.7 Environmental Statements in Calgary's "Vision" Document (Calgary 2020)

ADMINISTERED BY:
Corporate Resources Department

CURRENT STATUS:
Approved

ORIGIN/MOTIVATION:

In 1988, the Alberta Minister of Municipal Affairs asked Alberta's local governments to prepare "preferred vision" statements to help shape their future.

COUNCIL APPROVAL:
1991

CONTACT PERSON:

P. Anne Phelps, Research Assistant, Corporate Resources Department, City of Calgary,
P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-1328

DESCRIPTION:

Calgary City Council established a Task Force in 1988 to coordinate the city's "vision" project. The Task Force received input from over 300 individuals. The Calgary 2020 document has been written as a projection of the future into the year 2020. Among some of the conditions envisaged are the following:

1. Cars have been discouraged in the downtown and 75% of downtown workers use public transit;
2. Protection, rehabilitation and expansion of the city's natural areas and wildlife populations has been a high civic priority;
3. Calgary has become one of the best examples in North America of a "sustainable economy" where any development which utilizes resources and the environment does not damage prospects for their use by future generations;
4. There is a growing environmental management industry in the city;
5. Cities and parks in the city are linked by pathways or interconnected as "green belts";
6. Calgary's river system is an ecological model and becoming cleaner every year;
7. Many of the city's communities are heated and powered by environmentally-sensitive energy sources such as the sun, wind, new low-cost electrical sources, hydrogen and fusion.
8. Industry has been keeping in step with the wishes of Calgarians to eliminate industrial pollution altogether, more due to good corporate citizenship than to the tough new legislation adopted over the years;
9. Calgary has been recycling its wastes with a system that is convenient, economic and ecologically sound;
10. The city's Environmental Research Station is known internationally for its ecological peace force that can provide immediate emergency environmental assistance anywhere in the world;
11. The city has become Canada's best example of a Healthy City, understanding the importance of physical, mental, social and spiritual well-being;
12. The city has developed an integrated social support system based on a sharing of responsibilities among municipal, provincial and federal governments, voluntary agencies, corporations and communities themselves;
13. City planning philosophy has operated with safety and security as the cornerstones of development.

PROBLEMS/SUCCESSIONS:

Although the document was completed in 1989, it was referred to the incoming Council for further review and consideration. Council formally adopted the Calgary 2020 document in 1991 and established "Calgary 2020" as a reference document in the update of the Calgary General Municipal Plan, the Transportation Bylaw, the City's Growth Management Strategy, Parks/Recreation Plans, etc. Council further asked the Quality of Life Task Force from "Calgary... Into the 21st Century" to coordinate the work of the various groups interested in implementing Calgary 2020 and develop an integrated Action Plan in accordance with the goals, strategies and principles laid out in the plan. One of the most successful aspects of the "Vision" document was its ability to involve the general public during its formulation. Several other groups had already started to base some of their work on Calgary 2020, including the Quality of Life Task Force identified above, and the city's Healthy Cities movement.

DOCUMENTATION:

Calgary ...2020 Task Force (1989) **Calgary 2020: Calgarians Choosing Their Future Today.**

INITIATIVE:

4.8 Policy for environmentally sensitive areas

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Parks/Recreation Department and Planning Department

ORIGIN/MOTIVATION:

Public concern over environmental aspects of land development and the pressures exerted by rapid growth in the City on the natural environment.

COUNCIL APPROVAL:

Approved by Calgary Planning Commission in 1979 but the policy was never forwarded to Council for approval.

GOALS/OBJECTIVES:

The primary objectives of the policy are:

1. to protect land unsuitable in its natural state for development; and
2. to protect land with special or unique natural features.

The secondary objectives of the policy are:

3. to reduce or prevent, where possible and desirable, deleterious effects of construction on the natural environment;
4. to prevent damage to buildings and other structures caused by settling, slipping and flooding;

5. to incorporate those recreational experiences that are exclusive to natural areas into the urban form and to make these experiences possible in an area's local environment; and
6. to enhance the aesthetic qualities of a site.

CONTACT PERSON:

Jim Allison, Manager, Planning, Design and Marketing, Parks and Recreation Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-4710.

DESCRIPTION:

The policy describes physical, hydrological, biological and functional criteria for identifying environmentally sensitive areas and the types of use and management permitted within environmentally sensitive areas. It also deals with the development and/or use of land adjacent to environmentally sensitive areas. Where development on these lands may threaten the preservation of the environmentally sensitive area, the policy recommends that the applicant for a subdivision should conduct an environmental assessment study that:

1. describes the nature and extent of the environmentally sensitive area,
2. describes the extent of the proposed development and its relationship to the area,
3. discusses the possible effects of the development on the area, and
4. proposes means by which the negative effects on the area from the development will be avoided or minimized.

The legislative authority for the first objective in the policy derives from The Planning Act, 1977, which allows a municipality to require the dedication of land unsuitable in its natural state for development as an environmental reserve during the subdivision of land. In order to achieve the policy's second objective of protecting lands with special or unique features, the City can negotiate with the developer over the dedication of land as an environmental reserve, which might involve a density transfer from the land, or it can purchase the land outright.

PROBLEMS/SUCCESSSES:

Environmental reserves are not formally defined and cannot be controlled until land becomes subject to development, at which point it may be too late to protect an area. The use of the negotiation process for preserving environmentally sensitive areas means that all decisions are relative. The City is currently revising its policy and trying to define environmentally sensitive areas before development applications are made and area structure plans come into force. Some may be negotiated out but others will remain.

DOCUMENTATION:

City of Calgary Parks/Recreation Department and Planning Department (1979) **A Policy for Environmentally Sensitive Areas.**

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INITIATIVE:
4.9 Adopt-A-Park Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Parks and Recreation Department

ORIGIN/MOTIVATION:

The idea for the program came from similar types of programs that were already in existence in California and Washington. The City was also experiencing a major economic downturn during the time that the program was under consideration and it was anticipated that the program would result in cost savings for the City.

CONTACT PERSON:

Barry Rogers, Manager, Parks Division, Parks and Recreation Department, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-4735.

COUNCIL APPROVAL:

1983

DESCRIPTION:

Communities or individual citizens adopt a park and become responsible for its care.

PROBLEMS/SUCSESSES:

The program has not always resulted in cost savings but it has enhanced the quality of park maintenance. Participants in the program receive recognition in the form of hats, pins, certificates, etc., but the type of recognition most appreciated is a tangible enhancement for their park.

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INITIATIVE:
4.10 Waste Management and Recycling Program

CURRENT STATUS:

Various stages

CONTACT PERSON:

Dave Griffiths, Manager, Waste Management Section, Department of Engineering and Environmental Services, City of Calgary, P.O. Box 2100, Station M, Calgary, Alberta, T2P 2M5, (403) 268-1758

DESCRIPTION:

Unless otherwise specified, all of the following projects have reached the implementation stage:

1. Leaf composting pilot project
2. Office paper recycling in several city offices
3. Recycling of Christmas trees brought to landfills

4. Tire stockpiling at city's landfill sites
5. Participation in provincial used oil collection program
6. Recycling of white goods and other metals at landfill sites
7. Reclamation of used automotive batteries delivered to landfill sites
8. Green box recycling of newspaper, glass and cans for self-delivery to community recycling depots (pilot project)
9. Blue box recycling of newspaper, glass and cans (pilot project)
10. Construction of an interim storage facility for waste pesticide and herbicide containers delivered by landscapers and farmers
11. Referral of industrial users of city's landfills to the Alberta Waste Exchange Program
12. Reclamation of usable wood and steel from discarded mattresses and box springs at one of the city's landfill sites (in cooperation with local furniture company)
13. Recycling of used propane cylinders delivered to landfill sites
14. Tires on City trucks are recapped or retreaded to extend their life
15. Reclamation of usable construction lumber at the City's dry disposal site for use by City departments and interested local companies

PROBLEMS/SUCCESES:

The public has been strongly in favour of residential recycling programs for some time. Early estimates from Calgary's green box drop-off pilot project indicate high levels of participation. Calgary has taken longer than other major municipalities in Western Canada to establish a residential recycling program for two reasons. First, it has not faced the same pressures over declining landfill capacity that some other municipalities have. The city currently operates four landfills whose joint remaining capacity is about 40 years. At the same time, this lack of pressure has allowed Calgary to review the progress of recycling programs in other communities and potentially avoid problems encountered elsewhere. Another factor influencing Calgary's decision not to launch a residential program earlier was the lack of a market for most of the materials that were being considered for inclusion in the program. In 1988, when the first serious efforts were being made to conceptualize the program, the markets for recyclables were collapsing and, since then, markets for newspaper and glass have remained unstable. The market and landfill capacity factors have led Calgary to test less expensive options for residential recycling, such as a drop-off system at community depots. As part of the program, each household in the community receives a green box (similar in size and construction to the blue box) for storage of its recyclables.

DOCUMENTATION:

City of Calgary Engineering Department (1990) **Design and Implementation of a Residential Recycling Program: Pilot Project Status Report.**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

- 1.1 Environment and Infrastructure Directorate** (Directorate includes following departments: Fire, Fleet Management and Material Supply, General Administration Services, Municipal Engineering, Public Works, Railway Engineering, Urban Development)

CONTACT PERSON:

Bland Brown, Senior Director, Environment and Infrastructure Directorate, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7318

DEFINITION OF SUD:

The sustainable development concept is too narrow. A broader concept is that of "sustainable quality of life" which factors in matters other than strictly environmental issues and attempts to harmonize programs for social, environmental, and economic development.

INITIATIVES:

1. Water Conservation Program (implementation)
2. Energy Conservation Policy (implementation)
3. Mayor's Task Force on Safety (implementation)
4. Mayor's Task Force on Aboriginal Peoples (implementation)
5. Mayor's Task Force on Hunger (implementation)
6. Mayor's Task Force on Access for the Disabled (implementation)
7. Affirmative Action Program for Aboriginal Peoples, Women, the Disabled (implementation)
8. Regina Urban Environment Advisory Council (implementation)
9. Environmentally friendly purchasing guidelines (implementation)
10. Tree planting program (implementation)
11. Public education programs on environmental issues, including recycling and energy conservation (in cooperation with the University of Regina) (implementation)
12. CO2 Reduction Strategy (conceptual design)
13. Environmental comments in reports to City Council and Committees (implementation)
14. Establishment of an Energy Auditor position in the City (implementation)

COMMENTS:

Most of the City's efforts have been locally focused, which is not surprising given the lack of coordination at the national and international levels. Initiatives have been successful to date because City has been deliberate in its efforts to select programs which have been demonstrated successfully elsewhere. There has also been a high level of community

participation in City initiatives and several community organizations which have formed over environmental issues bring considerable additional resources to bear on environmental problems. All levels of government must be open to public participation while maintaining a balance with the governing process. In the environmental area, public input has been sought to aid in the formulation of policy to address specific problems, while in the social area, input has been sought to help define the issues or problems. There is no longer any question of which environmental issues are of importance.

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ORGANIZATIONAL UNIT:

1.2 Public Works Department

CONTACT PERSON:

W.J. (Bill) Aldcorn, Director, Public Works Department, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7650.

DEFINITION OF SUD:

The concept implies no damage to the environment from development.

INITIATIVES:

1. Household hazardous waste disposal program (implementation)
2. Recycling of asphalt from streets and concrete from sidewalks (implementation)
3. Mixed paper recycling (conceptual design)
4. Installation of energy efficient motors (implementation)
5. Tertiary sewage treatment (implementation)
6. Biological nutrient removal facility (under consideration)

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ORGANIZATIONAL UNIT:

1.3 Urban Planning Department

CONTACT PERSON:

Sue Luchuck, Acting Assistant Director, Urban Planning Department, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7554.

DEFINITION OF SUD:

"Growth of the local economy and population may enhance the potential for achieving sustained environmental quality but it will not determine or assure it. Sustainable development is development that contributes to the maintenance or improvement of the quality of the urban environment over the long term, irrespective of the rate of growth or size of the community. Growth in the local economy must be considered in terms of its effect on environmental quality in addition to its effect on employment and population size, both in the short and long term" (A Proposed Development Plan for the City of Regina, p.19).

INITIATIVES:

1. Environmental control considerations in new zoning bylaw (conceptual design)
2. Sustainable development component in City's proposed new Development Plan (conceptual design)
3. Sustainable Subdivision Concept (conceptual design)
4. Zoning bylaw amendment for industrial zoning reviews (conceptual design)
5. Encouraging infill and residential development in downtown core (implementation)

COMMENTS:

Environmental issues were found to be a major concern in a public opinion survey conducted prior to the preparation of the proposed new development plan. In a 1985 survey, the top six priorities for the expenditure of City tax dollars were: street improvements, economic expansion, improving housing in older neighbourhoods, lower property taxes, and re-development of the inner city. By 1990, the top six priorities were: street improvements, promotion of waste recycling, economic expansion, increased protection of groundwater aquifers, reducing air pollution, and energy conservation.

DOCUMENTATION:

Development Plan Task Force (1991) A Proposed Development Plan for the City of Regina, Summary Discussion Paper.

City of Regina Urban Planning Department (1990) A Public Opinion Survey on Planning Issues in Regina.

ORGANIZATIONAL UNIT:

1.4 Community Services, Parks and Recreation Department

CONTACT PERSON:

David Kalinovich, Director, Community Services, Parks and Recreation Department, City of Regina, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7348.

DEFINITION OF SUD:

An idea of inter-relationships or linkages among different components. It assumes that development will perpetuate itself and that whatever resources are used will be replaced.

INITIATIVES:

1. Naturalization of river banks (implementation)
2. Reduced fertilization on slopes surrounding storm water ponds in order to reduce weeds and algae in ponds (implementation)
3. Fewer chemicals used for weed control and timing of application changed to coincide with high plant uptake periods in fall (implementation)
4. Testing tree injection process for application of chemicals and fertilizers rather than absorption through root system (pilot project)
5. Larvicide program for mosquito control (implementation)
6. Working with School Board to have children build Purple Martin birdhouses for mosquito control (implementation)
7. Composting program for leaves and thatch from City lands (implementation)
8. Tree chipping program (implementation)
9. Residential curbside collection of Christmas Trees for chipping (implementation)
10. Sweetheart tree program (implementation)
11. Investigation of Xeriscape™ concept for landscaping (conceptual design)
12. Encouraging higher density of land use in cemeteries through changes to bylaws and construction of crematorium (implementation)
13. Designing buildings for multiple use so that it is possible to modify primary function of building over time (implementation)
14. Installation of new bicycle racks (implementation)
15. Establishment of an internal Environmental Advisory Group that generates ideas on how to change current procedures in order to improve environmental quality. Ideas sent to Senior Director for Environment and Infrastructure and distributed to other departments (implementation)

PROBLEMS/SUCCESES:

The naturalization program has not had a problem with public acceptance so far. The benefits of the program are that it reduces maintenance costs, the bullrushes uptake phosphates, and the habitat is more attractive for birds. The reduced fertilization program has received good cooperation from home owners surrounding the storm water ponds. The Christmas Tree chipping program recovered 70%-80% of the trees in the City and the acidic mulch it produces helps modify Regina's basic soils. Overall, the department has become much more concerned about the environmental impacts of its programs.

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ORGANIZATIONAL UNIT:

1.5 Health Department

CONTACT PERSON:

Dr. P. Hutchison, Medical Health Officer, City of Regina, 1910 McIntyre St., Regina, Saskatchewan, S4P 2R3, (306) 777-6618.

DEFINITION OF SUD:

Development within one's capability of utilizing resources so that there is no depletion of resources. The meaning of this concept for urban health issues is not clear, although it could be taken to mean sustainable programming.

INITIATIVES:

1. Children's hunger program (implementation)

COMMENTS:

The children's hunger program has strong financial support and is an example of a sustainable program that contributes to the goals of a Healthy City program. The concept of a Healthy City program is under consideration in the City of Regina with the administration currently considering options.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 Regina Urban Environment Advisory Council

DATE ESTABLISHED:

1988

REPORTS TO:

City Council

CONTACT PERSON:

Bland Brown, Senior Director, Environment and Infrastructure Directorate, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7318

MEMBERSHIP:

1 representative from city administration, 11 residents of Regina with expertise in environment-related disciplines.

FUNCTION/GOALS:

1. To identify environmental management issues and problems, on the initiative of Council and to communicate these issues to City Council;
2. To provide advice to City Council based on scientific principles, research, and analysis on environmental matters;
3. To provide informed and objective environmental information to the general public;
4. To prepare and publish an annual report on environmental issues affecting Regina;
5. To report to City Council on matters referred to it by City Council.

PROBLEMS/SUCCESES:

During 1990, RUEAC provided comments on the following: the City's proposed solid waste management strategy, an expansion of the city's sewage treatment plant, a CFC reduction strategy, the federal government's proposed Green Plan, a noise attenuation policy, and environmental control considerations in the City's industrial zoning review. City Council acted on many of the recommendations, referred others back to the City's administration, and took the remainder under consideration. RUEAC has been more successful in dealing with referrals from Council than in setting its own agenda for action.

DOCUMENTATION:

City of Regina ByLaw No.8723-CC-B88, October 11, 1988, A ByLaw to Establish the City of Regina Urban Environment Advisory Council.

Regina Urban Environment Advisory Council (1990) Annual Report, 1990.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Energy Conservation Policy

CURRENT STATUS:

Implementation



ADMINISTERED BY:

Energy Management Program, Urban Development Department

STAFF:

1

BUDGET:

\$72,500 (1989)

ORIGIN/MOTIVATION:

The original motivation for the policy was concern over energy scarcity and high energy costs during the late 1970s. There has been renewed interest in the program during the last few years because of concern for the environment.

CONTACT PERSON:

Randy W. Strelloff, Energy Auditor, Urban Development Department, P.O. Box 1790, 2476 Victoria Ave., Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306)777-7514

GOALS/OBJECTIVES:

To reduce direct and indirect energy costs for the City.

DESCRIPTION:

The formal program has been in operation since 1983, but other initiatives, including a street light relamping program, began in 1979. The expected payback period for initiatives in the program is up to about 5 years. The program includes some initiatives which do not necessarily save energy but do save on energy costs. In 1989, the following energy saving measures were implemented:

1. Evaluation and purchase of downsized vehicles.
2. More efficient disc drive on City's mainframe computer.
3. Street lighting conversion.
4. Motion detectors on building lights.
5. Energy management evaluation criteria for subdivisions.
6. Timers on outdoor rink lights.
7. Heat recovery and low emissivity ceiling at a recreation centre.
8. Cooling tower upgrade, ceiling insulation upgrade, new efficient boiler, and new building management system at City Hall.

In addition, a monthly newsletter discussing conservation and resource issues is distributed to the 2,000 staff and Councillors in the City.

PROBLEMS/SUCSESSES:

Cumulative savings to the City attributable to the program between 1979 and 1989 were \$2,145,000. About 60% of those savings came from a street light relamping program. The energy newsletter has been very successful in increasing employee awareness about issues related to energy and the environment. Employee awareness is felt to be an important factor in making the City's energy conservation program successful.

COMMENTS:

It is going to be difficult to persuade people to place less reliance on the car in Regina because downtown parking is cheap and widely available, and the roadway system is highly efficient and uncongested. Regina is so small that it takes about 10 minutes to get downtown by car but about 20 minutes by bus. We are a car-oriented society, especially in the Prairies. Another barrier to energy conservation initiatives is that electricity in Saskatchewan is so cheap. It makes the relative cost of alternative fuels very high.

DOCUMENTATION:

City of Regina (1989) **Energy Management Program: Annual Report, 1989.**

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INITIATIVE:

4.2 CO2 Reduction Strategy

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

Energy Management Program, Urban Development Department

ORIGIN/MOTIVATION:

Initiative was proposed by a member of Council.

CONTACT PERSON:

Randy W. Strelloff, Energy Auditor, Urban Development Department, P.O. Box 1790, 2476 Victoria Ave., Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306)777-7514

GOALS/OBJECTIVES:

To reduce CO2 emissions associated with corporate activities by 20% from 1988 levels by 1998 and to reduce CO2 emissions in the entire community by 20% by 2005.

DESCRIPTION:

In 1990, Council established the goals for its CO2 policy. A background report had been prepared on the issue by late 1990 and the strategy (corporate and community) is due to be completed by the summer of 1991. The draft strategic plan for corporate CO2 reduction identifies departmental reduction targets and associated costs for achieving the 20% goal by 1998. The estimated cost of the program is \$5.5 million or \$276/tonne of reduction. Most, but not all, of the reduction measures are cost effective.

DOCUMENTATION:

Report to City Council from the Works and Utilities Committee, December 3, 1990, **Reduction of Carbon Dioxide (CO2) Emissions.**

Corporation of the City of Regina, Energy Management Program (1991) **Draft Carbon Dioxide Emission Reduction Corporate Strategic Plan.**

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INITIATIVE:

4.3 Environmental control considerations in new zoning bylaw

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

Urban Planning Department

STAFF:

Current resources

COUNCIL APPROVAL DATE:

Not yet approved

ORIGIN/MOTIVATION:

During preparation of the City's new development plan, it became apparent that the City would need a new set of tools to achieve some of the environmental objectives arising from the plan. One key issue of concern was the location of a great deal of industrial activity in Regina directly over an aquifer which supplies 30% of the City's drinking water and the need to protect the aquifer from future industrial development.

CONTACT PERSON:

Kingsley O. Okyere, Senior Planner, Urban Planning Department, City of Regina, 2476 Victoria Ave., P.O. Box 1790, Regina, Saskatchewan, S4P 3C8, (306) 525-1801

DESCRIPTION:

A new zoning bylaw has not yet been formulated, but some of the Urban Planning Department's preliminary discussions include consideration of the following:

1. (Energy Conservation) That maximum illumination standards be prescribed for exterior residential, commercial and industrial areas in accordance with standards of the Illumination Engineering Society. Public rights-of-way and public properties are exempted from the standards for public safety reasons.
2. (Environmental Protection) That quantitative standards be established for the following environmental hazards: toxic and noxious materials, ground water infiltration, odour, glare and light, smoke and particles, temperature, ground transmitted vibrations, electromagnetic interference. These standards will vary for different use classes so as to ensure that unreasonable standards are not prescribed for non-hazardous uses.
3. (Environmental Protection) That industrial developers be required to provide impact reports to identify the effects of their projects (on the surrounding land uses) in relation to the above environmental hazards.
4. (Environmental Protection) That an Aquifer Protection Overlay District be superimposed on areas of the City situated on the Regina aquifer system, and that special development standards be prescribed for developments in the overlay district. The prescribed standards should distinguish between residential and non-residential developments, with the latter receiving more stringent standards.
5. (Environmental Protection) That a minimum development setback from City trees be prescribed. Deviations from the setback requirement would be allowed where the tree: prevents the opening of a street, prevents all reasonable access to the property, prevents the proper construction of a service, or prevents all reasonable use of a property.
6. (Reduced Reliance on the Car) That where off-street parking standards are tied to the number of employees, reductions in the required ratios be allowed (50% or less) in exchange for contributions to such items as employee carpools, vanpools and transit usage.

7. (Social Equity) That incentives be provided in the bylaw for the construction and rehabilitation of moderate and low income housing, based on the following conditions:
- (a) in the Inner City, Downtown and older neighbourhoods, the current 1 to 1 bonus ratio be increased to 2 to 1 or better in return for the inclusion of low to moderate income housing in mixed-use developments, or the rehabilitation of existing low income residential units;
 - (b) in the suburban areas, the bonus ratio should not be set on a floor area basis but on unit basis at one additional market-rate housing unit for each low-income unit provided.

PROBLEMS/SUCCESES:

Too early to say because the new bylaw has not yet been approved. The new bylaw will provide the implementation tool for the new development plan, which is still evolving. The bylaw will probably be modified further once the development plan has undergone its final revisions.

DOCUMENTATION:

City of Regina Urban Planning Department (1991) **Issues and Options for a New Zoning Bylaw: A Discussion Paper.**

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INITIATIVE:

4.4 Environmental comments in reports to City Council and Committees

ADMINISTERED BY:

Various departments

CURRENT STATUS:

Implementation

COUNCIL APPROVAL DATE:

1990 (Implemented in 1989 within several departments)

ORIGIN/MOTIVATION:

An administrative initiative in response to growing public concern about the environment.

CONTACT PERSON:

A.R. Linner, City Manager, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7311.

GOALS/OBJECTIVES:

1. To establish a routine for treating environmental implications as consciously and critically as financial or communication matters
2. To inform the public of the environmental consequences of private and municipal activities.

DESCRIPTION:

All administrative reports submitted to committees or City Council must include a section describing the environmental implications of the proposal contained within the report. There are no formal guidelines defining the content of this section. However, in general the section identifies potential environmental impacts, indicates whether mitigative action is proposed, and outlines the process by which such action will be taken. Detailed impact statements, where available, are referenced in this section. In most cases, the environmental section has consisted, to date, of no more than a paragraph.

PROBLEMS/SUCCESES:

It is not clear whether the statements have affected Council decisions to date, but they increase awareness about environmental concerns for the staff writing the reports and for decision-makers.

DOCUMENTATION:

Memorandum from Office of the City Manager to all Department Heads, April 12, 1990, **Policy Statements - City Council Procedure ByLaw.**

INITIATIVE:

4.5 Transportation Impact Studies

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Departments of Municipal Engineering and Public Works

COUNCIL APPROVAL DATE:

1983

ORIGIN/MOTIVATION:

Past experience with public concerns over City of Regina transportation projects.

CONTACT PERSON:

Bland Brown, Senior Director, Environment and Infrastructure Directorate, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7318

GOALS/OBJECTIVES:

A Transportation Impact Study (TIS) must be prepared for all major new roadways constructed by the City and may be required for minor roadways or traffic related projects such as the removal of parking on arterial streets or the creation or discontinuation of one-way directional flow on a roadway. The specific objectives of the TIS are:

1. To serve notice to all affected and interested parties, through a mandatory public meeting, that a Transportation Project is being considered and that public input is possible;

- 2. To create a planning tool for officials of the Public Works and Engineering Department that examines all phases of the project in a logical and thorough manner. It brings public concerns to the forefront, prior to completion of the detailed design or commencement of construction so that chances of a project being delayed or even cancelled because of public unrest or dissatisfaction, are minimized;
- 3. To serve as a decision making tool for Regina City Council. The TIS is submitted to City Council for approval prior to any work proceeding. Council will be made aware of all potential harmful impacts the project may have on the environment and the mitigative measures that may be required to lessen impacts before approval is given to proceed with the work.

DESCRIPTION:

The study should include the following components:

- 1. A description of the project;
- 2. The purpose of undertaking the project;
- 3. A justification of the need for undertaking the project;
- 4. Alternatives to the project;
- 5. A description of implementation methods for the project and its alternatives;
- 6. A description of the limits or boundaries of the project as well as the greater overall area that are impacted by the project;
- 7. Identification of the natural, cultural, social, and economic environments affected either directly or indirectly. This would include the effects of the various methods of carrying out the project and the alternatives, including the "do nothing" option;
- 8. Remedial measures for any adverse effects identified;
- 9. Advantages or disadvantages to the environment that the project or its alternatives may have;
- 10. A list of impacts to other parties not necessarily located in or around the project limits, such as: government agencies, crown corporations, school boards, institutions, or other transportation agencies;
- 11. A description of the procedures followed and extent to which the public has or will be involved in the project.

DOCUMENTATION:

City of Regina, Public Works and Engineering Department and Planning Department (1985) **Guidelines for the Preparation of a Transportation Impact study.**

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INITIATIVE:

4.6 Sustainable Subdivision Concept

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

Urban Planning Department

ORIGIN/MOTIVATION:

The Saskatchewan Housing Corporation, the Regina Property Development Department and the Urban Planning Department are considering establishment of such a subdivision as part of a new development in the southeast part of the City.

CONTACT PERSON:

Sue Luchuck, Acting Assistant Director, Urban Planning Department, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7554.

GOALS/OBJECTIVES:

Sustainable development has been referred to as "self-reliant development" and "self-contained development" but it is difficult to achieve a high degree of self-sufficiency at the subdivision or neighbourhood level. The sustainable subdivision concept should therefore focus on improving the quality of life in subdivisions through the efficient use and integration of natural and man-made resources - land, water, energy and buildings.

DESCRIPTION:

The features of a sustainable subdivision include the following:

1. intensive and compact land use development;
2. energy conservation and recycling of waste;
3. balance and integration of natural and man-made components;
4. imaginative structural designs that incorporate resource conservation features;
5. proximity of related structures and activities;
6. a full range of cultural developments (theatres, water sports); and
7. adequate open space (gardens, parks, farms, wilderness) for both humans and animals.

The concept includes guidelines for density of development, site selection, site preparation, street layout, lot layout, dwelling layout and landscaping.

PROBLEMS/SUCCESSSES:

The proposal has been put on hold while planning staff deal with the preparation of the City's new Development Plan. To encourage voluntary compliance with the guidelines, amendments would have to be made to the Development Plan, Zoning Bylaw and Subdivision Bylaw. Immediate actions that could be undertaken under the current Zoning Bylaw include:

1. the designation of "solar zones" in which issues such as the shape of lots, building setbacks, vegetation placements and lot orientation could be controlled;
2. the designation of "direct control districts" in which incentives would be given for conservation measures; and
3. the designation of "innovative development areas" where developers would be encouraged to include conservation measures in developments.

DOCUMENTATION:

Memorandum to Senior Director, Infrastructure and Land Use, from Director of Urban Planning, November 2, 1990, Saskatchewan Housing Corporation Land Development Agreement Sustainable Subdivision Concept.

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INITIATIVE:

4.7 Sustainable development component in City's proposed new Development Plan

CURRENT STATUS:

Conceptual Design

ADMINISTERED BY:

Urban Planning Department

ORIGIN/MOTIVATION:

The new plan arises from a periodical review of the City's Development Plan. For the first time, environmental issues are being specifically recognized in the Development Plan. The reason for their inclusion is increased public concern over with the environment (as reflected in a 1990 public opinion survey of Regina's citizens) that has been fostered by a number of factors, including problems with the City's drinking water, general media attention to environmental issues, and a local PCB spill several years ago.

CONTACT PERSON:

Sue Luchuck, Acting Assistant Director, Urban Planning Department, City of Regina, P.O. Box 1790, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7554.

GOALS/OBJECTIVES:

The two basic principles of the plan are as follows:

1. To promote development that contributes to maintenance of or improvements to the quality of urban life.
2. To ensure that development occurs in a cost efficient, environmentally responsible and socially equitable manner.

Some of the objectives related to sustainable urban development in the Development Plan include the following:

1. To promote energy conscious land development practices and development of an energy efficient urban form.
2. To protect groundwater resources from contamination in order to ensure a safe supply of drinking water.
3. To promote development practices which reduce the consumption of water.
4. To identify areas suitable for the safe use and disposal of hazardous materials.
5. To protect key wildlife habitats.

6. To minimize the environmental impacts associated with the disposal and diversion of solid wastes.
7. To address potential environmental impacts associated with industrial and commercial developments by: ensuring industrial and commercial development meets acceptable environmental standards; and improving the environmental quality of the urban environment by reducing the potential conflict between industrial and non-industrial uses.
8. To encourage the provision of affordable housing, particularly for low and moderate income households and special needs groups.
9. To encourage higher density housing and mixed use development along or adjacent to major arterial streets
10. To provide transportation alternatives aside from the private automobile, particularly those serving the Downtown.

DESCRIPTION:

Selected recommendations of the proposed plan with relevance for sustainable urban development are as follows:

1. That a compact urban form should be achieved by:
 - (a) reducing the proportion of land dedicated to roads through efficient subdivision design,
 - (b) discouraging leapfrog development,
 - (c) favouring the continued development of new areas with higher densities,
 - (d) promoting infill redevelopment and rehabilitation.
2. That residential densities should be allocated through the process of subdivision design and zoning (eg. mixed uses) in a manner which places higher densities closest to the principal employment centres.
3. That vacant Inner City sites should be redeveloped at higher densities where neighbourhood plans permit, but in a manner which enhances the amenity for the neighbourhood.
4. That commercial uses should be allocated through the process of subdivision design and zoning in a manner which facilitates combined trips to a single destination.
5. That all new subdivisions should ensure that as many lots as possible are oriented within 15 degrees of the north/south axis. Where concept plans are approved after the adoption of this policy, a minimum of 80% of lots for detached dwellings in each neighbourhood shall be oriented within 15 degrees of the north/south axis.
6. That developments which use, store or warehouse hazardous materials shall be approved only if appropriate measures are undertaken to prevent possible contamination of the aquifer.
7. That methods to address the potential impact of existing industries should be considered, including:
 - (a) review and monitoring of environmental impacts,
 - (b) providing advice and assistance to existing industries in undertaking remedial measures,

- (c) formation of industrial improvement associations,
 - (d) facilitating the selective relocation of industries where remedial measures are not possible,
 - (e) identifying and planning for areas in the region where industries utilizing hazardous materials can best be developed.
8. That a solid waste management plan shall be developed to encourage waste reduction, waste reuse, waste recycling, and recovery and marketing of waste resources.
 9. That a public education program shall be implemented to encourage voluntary actions which will reduce the need for solid waste disposal at the sanitary landfill site.
 10. That alternative strategies to decrease the use of pesticides, herbicides and chemical fertilizers should be considered.
 11. That consideration should be given to establishing a City program for composting residential waste by the City for use in parks.
 12. That a feasibility study should be undertaken to examine the benefits and costs of establishing an environmental industrial park which is not located over the aquifer system.
 13. That quantitative performance standards shall be established for industrial uses in all industrial use zones to address fire and explosion hazards, visual impacts, surface water contamination, noise, odour, smoke and particle emissions.
 14. That the City of Regina should encourage the abatement and/or relocation of industries which do not meet environmental performance standards.

PROBLEMS/SUCSESSES:

Too early to say. Only one public meeting has been held so far to review the proposed plan and the implementation section has not yet been written.

DOCUMENTATION:

Development Plan Task Force (1991) A Proposed Development Plan for the City of Regina, Summary Discussion Paper.

City of Regina, Urban Planning Department (1990) Transportation/Infrastructure, Discussion Paper.

City of Regina, Urban Planning Department (1990) Urban Environment, Discussion Paper.

INITIATIVE:

4.8 Sweetheart tree planting program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Community Services, Parks and Recreation Department

CONTACT PERSON:

David Kalinovich, Director, Community Services, Parks and Recreation Department, City of Regina, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7348.

DESCRIPTION:

For \$60.00, a member of the community can purchase a tree that will be planted and maintained by the department. The tree will have a plaque on it indicating that it has been dedicated to a person designated by the purchaser.

PROBLEMS/SUCSESSES:

Although this is only the first year of operation of the program, it has been very successful. The department has sold 92 trees to date this year.

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INITIATIVE:

CURRENT STATUS:

4.9 Investigation of XeriscapeTM concept for landscaping

Conceptual design

ADMINISTERED BY:

Community Services, Parks and Recreation Department

ORIGIN/MOTIVATION:

Regina is located in a semi-arid region that receives about 10 inches of rain annually. During the summer months, a great deal of domestic water consumption is used for grass and plant watering.

CONTACT PERSON:

David Kalinovich, Director, Community Services, Parks and Recreation Department, City of Regina, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7348.

GOALS/OBJECTIVES:

To reduce the use of domestic water consumption during the summer months.

DESCRIPTION:

XeriscapeTM is an education program on landscape water conservation that allows the property owner to have a flourishing landscape while conserving water. The seven gardening principles of Xeriscaping include: planning and design, soil analysis, efficient irrigation, practical turf areas, appropriate plant selection, the use of mulches, and appropriate maintenance. The department is working with the development industry to use xeriscaping on land occupied by new show homes in the city.

DOCUMENTATION:

National Xeriscape Council (no date) **What is Xeriscape?**

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INITIATIVE:
4.10 Special Initiative Investment Program

CURRENT STATUS:
Implementation

ADMINISTERED BY:

Energy Management Program, Urban Development Department

STAFF:

No additional staff

BUDGET:

\$250,000

ORIGIN/MOTIVATION:

The special initiatives program has established a source of funding for energy conservation and other types of projects that lies outside of a department's regular budget. In the past, one of the most serious barriers to energy initiatives was the difficulty departments had in finding internal funding to launch an initiative. The SIIP has helped to overcome that problem.

CONTACT PERSON:

Randy W. Strelloff, Energy Auditor, Urban Development Department, P.O. Box 1790, 2476 Victoria Ave., Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7514.

GOALS/OBJECTIVES:

To create the opportunity for cost savings and additional revenue for the Corporation. The proposal allows for the implementation of these initiatives in a way that reduces the impact on a department's operating and capital budget.

DESCRIPTION:

The special initiatives program establishes an investment fund for all types of projects, including energy projects, that offer the potential for reduced operating costs and/or enhanced revenues. Any department can apply to the fund for a loan to cover the costs of an energy conservation initiative. The amount of the loan repayment to the fund plus interest must be included in the annual operating budget of the project. In 1990, Council allocated \$250,000 to the fund. The fund is viewed as a financial investment with the potential to generate a rate of return equal to that which could be generated if the fund had been invested in the market place.

DOCUMENTATION:

Report to City Council from the Finance and Administration Committee, March 26, 1990, **Special Initiative Investment Program.**

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INITIATIVE:
4.11 Environmentally Friendly Purchasing Policy**CURRENT STATUS:**

Implementation

ADMINISTERED BY:

Purchasing Department

ORIGIN/MOTIVATION:

In 1989, the Administration entered into a joint effort with a group of 11 other Canadian cities (ACCESS) to prepare a plan that would assist in developing an on-going data base to establish and maintain purchasing guidelines for products containing post-consumer waste and/or products which are environmentally friendly.

CONTACT PERSON:

Larry J. Katchuk, Director of Purchasing, City of Regina, Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7332.

GOALS/OBJECTIVES:

City Council's statement of principle on purchasing is as follows: "City Council will, as a measure of its commitment to preservation of the environment and conservation of natural resources, favour and promote the use of products, services, and processes which minimize waste and which are environmentally benign." The specific objectives of the policy are as follows:

1. All departments will ensure that purchasing specifications are amended to allow for the use of products, services and processes which are environmentally sensitive.
2. The Purchasing Department and affected departments will develop a mechanism to evaluate the impacts of: any added costs of acquiring environmentally sensitive product; the impact of the alternative products on the intended use; and the benefit to the environment of using the environmentally sensitive products.
3. The Administration will develop an identification program to create an awareness of the City's initiatives relating to the use of environmentally sensitive products.
4. The Administration will provide an annual report on the progress of the program.
5. The City will continue to participate in the activities of ACCESS (Association of Canadian Cities for Environmentally Sound Strategies).

DESCRIPTION:

The City is using the M.M. Dillon study on environmentally friendly purchasing that was commissioned by ACCESS as a guideline for identifying areas where the four R's (reuse, recycle, reduce, replace) can be applied. In addition, there is a review underway related to environmental provisions in contracts. The City's current purchasing initiatives in this area include the following:

1. Replacement of used computer printer and photocopying machine cylinders with refurbished cartridges and recoating and reusing of fusers and rollers.
2. Use of a phantom tube (energy saving device) in tandem with a 35 watt florescent light tube in place of two 40 watt florescent lamps.
3. Purchase of press room inks with a canola base to replace petroleum based compounds.
4. Eco-clean wash being used to replace previous blanket wash chemicals.

PROBLEMS/SUCSESSES:

Some suppliers have been concerned about the need to carry two lines: one with recycled content and the other without.

DOCUMENTATION:

Report to Finance and Administration Committee from City Manager, November 8, 1990, **City Purchasing Practices and Policy.**

M.M. Dillon (1990) **Purchasing of Products Containing Post-Consumer Waste and/or Products Which Are Environmentally Sound**, Report prepared for the City of Toronto and other Canadian municipalities and agencies.

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INITIATIVE:

4.12 Development Plan and zoning bylaw amendment for industrial zoning reviews

ADMINISTERED BY:
Urban Planning Department

CURRENT STATUS:
Conceptual design

COUNCIL APPROVAL:
Not yet approved



ORIGIN/MOTIVATION:

Concern over possible ground water contamination from industrial land uses.

CONTACT PERSON:

Kingsley O. Okyere, Senior Planner, Urban Planning Department, City of Regina, 2476 Victoria Ave., P.O. Box 1790, Regina, Saskatchewan, S4P 3C8, (306) 525-1801.

GOALS/OBJECTIVES:

1. To pursue more extensive environmental review and assessment for industrial development and land uses.
2. To promote zoning requirements on the basis of protection for the City's environment and enhanced long-term security for industry and its employees.
3. To ensure that the Zoning Bylaw includes appropriate emphasis on environmental matters.

DESCRIPTION:

Any development which utilizes, stores or warehouses hazardous substances (as defined in Saskatchewan's Hazardous Substances Regulations) shall be reviewed under the discretionary use procedure. The review will identify the environmental impacts associated with the proposed development and prescribe appropriate conditions to mitigate the adverse impacts. If the impacts cannot, in the view of Council, be satisfactorily mitigated, the development will not be approved. All industrial development permit applications will include supplemental information that will facilitate an environmental review. The supplemental information will include the following:

1. A description of the proposed industry in terms of type, products, and processing/manufacturing processes.
2. Estimated number of motor vehicles accessing the industrial site per operating day.
3. Whether any existing structures or underground tanks will be removed and whether there will be any site excavations.
4. Whether there will be any new buried tanks and a description of their contents.
5. Details about on-site investigations (e.g. test drilling for soils).
6. Details on any of the following if they will be produced, transported, or stored: hazardous substances, glare, air emissions, odours, noise, solid waste, storm water, and wastewater.
7. Proposed plans or activities to minimize any adverse environmental effects arising from the industrial use.
8. Description of an emergency response plan.
9. Previous experience in operating this type of development.
10. Previous history of convictions or ongoing investigations of environmental infractions in Saskatchewan or other jurisdictions.

The environmental review shall follow an environmental evaluation checklist which will determine whether: (a) the development application includes adequate information for evaluation; (b) whether there is a potential for emissions, discharges or effect on the environment; (c) the sensitivity of the site to potential impacts; and (d) an overall assessment of the impact of the development on different environmental components. Any impacts of concern or other problems shall be discussed with the applicant.

PROBLEMS/SUCCESSSES:

Current legislation does not allow the City to require performance bonds to ensure that environmental standards are met. However, it does permit the City to impose fines of up to \$5,000 and an additional \$1,000 for each day that zoning standards are violated.

DOCUMENTATION:

Report to City Council from the Regina Planning Commission, June 18, 1990, **Industrial Zoning Review: Environmental Control Considerations.**

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INITIATIVE: 4.13 Establishment of an Energy Auditor position in the City **CURRENT STATUS:** Implementation

ADMINISTERED BY: Urban Development Department **STAFF:** 1

COUNCIL APPROVAL DATE: 1989 **BUDGET:** \$70,000

ORIGIN/MOTIVATION:
Need for the position identified by senior management.

CONTACT PERSON:
Randy W. Strelloff, Energy Auditor, Urban Development Department, P.O. Box 1790, 2476 Victoria Ave., Queen Elizabeth II Court, Regina, Saskatchewan, S4P 3C8, (306) 777-7514.

DESCRIPTION:
In addition to responsibility for the City's energy conservation policy, the auditor proposed the Special Initiative Investment Program and is coordinating preparation of the City's CO2 reduction policy

PROBLEMS/SUCCESES:
The position has evolved to encompass environmental as well as energy concerns. A problem with incorporating environmental concerns into project evaluation is that many of them cannot be quantified and therefore do not carry as much weight as the quantifiable costs.



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INITIATIVE 4.14 Waste Reduction and Recycling Program **CURRENT STATUS:** Various stages

CONTACT PERSON:
G. Nieminen, Manager, Environmental Engineering Division, Municipal Engineering Department, City of Regina, P.O Box 1790, Regina, Saskatchewan, S4P 3C8, (306) 777-7441, and Derrick Bellows, Manager of Solid Waste Collection and Disposal, Public Works Department, City of Regina, P.O. Box 1790, Regina, Saskatchewan, S4P 3C8, (306) 777-7568.

REPORTS TO:
Director, Municipal Engineering, and Director, Public Works.

INITIATIVES:

1. Household hazardous waste days (implementation)
2. Operation of two used oil recycling depots (implementation)
3. Sewage sludge land application (pilot project)
4. Concrete and asphalt recycling. Reuse of street asphalt planings at the City's asphalt plant (implementation)
5. Public education campaign for backyard composting encouraging householders to start composting and join the "Great Composters' Society" (implementation)
6. Aluminum can recycling bins at all major City facilities (implementation)
7. Christmas Tree and park tree chipping program (implementation)
8. City Hall office paper recycling program (implementation)
9. Residential mixed paper recycling program (conceptual design)
10. Creation of a Waste Diversion Coordinator position (conceptual design)

PROBLEMS/SUCCESES:

The traditional blue box recycling program is not viable in Regina because of high costs and lack of ready access to markets. There are no provincial cost-sharing programs available for recycling in Saskatchewan. The community wants to see the City initiate a residential recycling program, so the City is planning to launch a mixed paper recycling program in 1991. It will not be a blue box type of program. There are a number of private/non-profit recycling initiatives supporting the City's recycling initiatives. The private initiatives benefit from the Province's deposit system on all aluminum beverage containers, plastic beverage bottles, and liquor bottles. The Saskatchewan Association of Rehabilitation Centres (SARCAN) operate buy-back recycling depots for glass, aluminum and plastic beverage bottles. There are about 100 aluminum can recycling depots in the City operated by the Hospitals of Saskatchewan who refund the cans themselves and use the money to help fund their programs. There are no city-wide tin can recycling opportunities.

DOCUMENTATION:

Municipal Engineering Department (1991) **Works and Utilities Committee, Annual Seminar: Waste Management Initiatives.**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Board of Commissioners

CONTACT PERSON:

Richard L. Frost, Chief Commissioner, City of Winnipeg, 3rd Floor Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2375.

DEFINITION OF SUD:

There is lots of interest in the concept and the philosophy surrounding it in the City, but what it really means is less clear. It is not simply a new buzz word but rather represents a new value structure.

INITIATIVES:

1. **CFC Policy (implementation)**
2. Tree planting program (implementation)
3. Recycling and waste management (implementation)
4. Water conservation
5. Environmental review of City Hall (implementation)
6. No-smoking policy (recently modified)
7. Annual Report on Environmental Issues (conceptual design)

COMMENTS:

Management is becoming better informed about what the concept of sustainable development is, what the goals are, and what the implications are. Municipal government is, by definition and maybe even by accident, currently involved in a great many projects that are already contributing to sustainable urban development. The push for sustainable development is similar to the push four or five years ago with respect to human resources management when all sorts of existing program were labelled as being relevant. The problem is going beyond what is already in place and determining acceptable levels of expenditure on new programs.

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ORGANIZATIONAL UNIT:

1.2 Division of Planning and Community Services (responsible for Planning, Health, Land Development, Library and Social Services departments)

CONTACT PERSON:

Tom B. Yauk, Commissioner of Planning and Community Services, City of Winnipeg, 3rd Floor Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2376.

DEFINITION OF SUD:

It is a bundle of terms and each organization selects a different one for its own use. The term has been used and abused. It means one thing to government and another to business. Within the Division, it is viewed in its broadest sense.

INITIATIVES:

1. **Social development policy (conceptual design)**
2. **Sustainable development component in Plan Winnipeg Review (conceptual design)**
3. Plan Winnipeg 1986 contained policies for urban containment and older neighbourhood revitalization (implementation)
4. Joining the "Keep America Beautiful" organization.
5. **Winnipeg Core Area Initiative (implementation)**

COMMENTS:

The social development strategy has not been as successful as it could have been because federal funding has been cut. Now programs such as neighbourhood restoration only have provincial and municipal funding. Although 80% of Canada's population lives in municipalities, municipalities have little say in federal policies that directly affect them, such as social assistance and welfare programming.

ORGANIZATIONAL UNIT:

1.3 Division of Works and Operations (responsible for Streets and Transportation, Transit, Winnipeg Hydro, Operations, and Waterworks, Waste and Disposal departments)

CONTACT PERSON:

R.J. McRae, Commissioner of Works and Operations, City of Winnipeg, 3rd Floor Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2378.

DEFINITION OF SUD:

We are currently struggling to define it and have had several sessions to attempt to define the concept as it relates to Winnipeg.

INITIATIVES:

1. **Waste minimization and recycling program (implementation)**
2. **Water quality study program (implementation)**
3. **Offer to host Manitoba's hazardous waste management facility (submitted)**
4. **Sludge disposal on land (implementation)**
5. **Intervention in an Ontario Environmental Assessment Hearing for a proposed development on a lake in Ontario which is Winnipeg's main source of drinking water (under way)**

COMMENTS:

Environmental issues have been causing concern, but programs to deal with them tend to have very high price tags. The concept of sustainable urban development has not yet become an issue in Winnipeg.

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ORGANIZATIONAL UNIT:

1.4 Division of Protection, Parks and Culture (responsible for Ambulance, Fire, Police and Parks and Recreation departments)

CONTACT PERSON:

Loren H. Reynolds, Commissioner of Protection, Parks and Culture, City of Winnipeg, 3rd Floor Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2379.

DEFINITION OF SUD:

Continued and long term production that considers repercussions and does not damage the output base. An analogy is the ability to obtain continued production from a wheat field by returning nutrients to it.

INITIATIVES:

1. Christmas Tree drop-off and chipping program. As an inducement, 10,000 free tree vouchers for 3 year old seedlings were offered for the return of Christmas trees to the drop-off locations. The public was also offered the wood chip material for use as mulch, free of charge (implementation)
2. Larvicide program (implementation)
3. Tree planting program (implementation)
4. Reclamation of open space for parkland (implementation)
5. Introduction of natural predators in City's conservatory for biological control and use of mechanical measures and alterations in horticultural practices for cultural control (implementation)
6. Transformation of a landfill site into a park (implementation)

COMMENTS:

These programs all are ongoing and have not been developed just because of an interest in sustainable development.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:	DATE ESTABLISHED:
3.1 Advisory Committee on Ozone Depleting Substances	1990

ORIGIN/MOTIVATION:

Established to implement the recommendations of the Task Force on CFC's and Halons.

CONTACT PERSON:

Brian Gaber, Energy Management Coordinator, City of Winnipeg, 3rd Floor, Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2339.

MEMBERSHIP:

Representatives from Planning, Health, Operations, and Parks and Recreation Departments. Chaired by representative from the Board of Commissioners' Research and Policy Analysis Branch.

FUNCTION/GOALS:

Upon the recommendations of the Task Force on CFC's and Halons, the responsibilities of the Advisory Committee include the following:

- (a) to continue to acquire and disseminate technical knowledge in all matters of Ozone Depleting Substances;
- (b) to liaise with the Province of Manitoba and Government of Canada and monitor progress with laws and regulations pertaining to Ozone Depleting Substances;
- (c) to monitor industrial-technical progress in the development of substitute substances and technologies;
- (d) to recommend specific action for Civic Departments to reduce or eliminate Ozone Depleting Substances in their facilities and operations;
- (e) to review and recommend changes in purchasing policy and operating and maintenance procedures in keeping with developing technology;
- (f) to liaise with industry and business with the goal of reducing CFC and Halon emissions, including the implementation of City Bylaws;
- (g) to identify resource requirements and associated costs to carry out the above functions.

INITIATIVES:

Recommendations of the Committee to date include the following:

1. That the City purchase a fluorescent refrigerant leak detection system and a portable refrigerant recovery recycling unit at an estimated cost of \$7,000.
2. Ensure that existing and new service agreements with refrigeration service and repair contractors adhere to Environment Canada requirements.
3. Convert the 12 year old chiller (air conditioning system) at the Centennial Library to operate on the new alternative refrigerant HCFC-123 at an estimated cost of \$10,000.
4. Replace the 27 year old chillers at City Hall and the Public Safety Building with HCFC-123 chillers within the next 3 years. The estimated total installed cost to replace each chiller will be between \$200,000 and \$250,000.
5. Instead of doing environmentally damaging "dump tests" where halon is released, use air leakage tests to test enclosures that have Halon 1301 fire suppression systems.

DOCUMENTATION:

Report of the Executive Policy Committee, December 13, 1989, Advisory Committee on Ozone Depleting Substances, File EH-1.

City of Winnipeg Budget Issues: Environmental Issues, Volume 1, No. 8, 1991.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 CFC Policy

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Energy Management Coordinator



BUDGET:

\$15,000 (to hire summer student to assist in inventory, 1990 and share in cost of pilot CFC project for refrigerators and freezers)

ORIGIN/MOTIVATION:

The City of Toronto sent Winnipeg its CFC by-law and urged adoption of a similar policy. Reducing or eliminating ozone depleting substances in the City should be viewed as a contribution to a national and global effort. The City can set an example for other municipalities and industries to follow.

CONTACT PERSON:

Brian Gaber, Energy Management Coordinator, City of Winnipeg, 3rd Floor, Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2339.

COUNCIL APPROVAL:

1989

DESCRIPTION:

In 1989, an internal Task Force on CFCs and Halons was established to review the City's facilities and operations in order to determine where reduction or elimination of CFCs and halons could be made. The Task Force consisted of representatives from the following departments: Planning, Health, Operations, Parks and Recreation, Civic Properties, and Waterworks, Waste and Disposal. The final recommendations of the Task Force called for the establishment of an Advisory Committee on Ozone Depleting Substances. One initiative arising out of the report has been a pilot CFC Recovery Project to recover and recycle refrigerant from old refrigerators and freezers prior to disposal.

PROBLEMS/SUCCESES:

Many of the CFC and Halon alternatives are not yet on the market but are still in the development and testing stage. For those which are available, the costs are high and the quantities available low. In light of this problem, the City will try to conserve and recycle in the short term. The City decided not to follow Toronto's lead in establishing a bylaw because it wants to wait and see what the impact will be of the proposed CFC regulations that are being established by Manitoba Environment. Implementation of the CFC policy is currently threatened by budget cuts. A problem with certain environmental policies such as this one is that they do not have as visible a local presence as other initiatives, such as a new community centre, and when funds are limited and tradeoffs must be made, the most visible initiatives are the ones that will survive.

DOCUMENTATION:

City of Winnipeg Chlorofluorocarbon and Halon Task Force Report (1989) **A Review of the City of Winnipeg Facilities and Operations to Determine Where Reduction or Elimination of CFC's and Halons Can Be Made.**

City of Winnipeg Advisory Committee on Ozone Depleting Substances (March 1991). **Implementation measures to reduce the City's dependence on ozone depleting substances.**

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INITIATIVE:**4.2 Newsletter on environmental issues****CURRENT STATUS:**

Implementation

ADMINISTERED BY:

Board of Commissioners

BUDGET:

None

ORIGIN/MOTIVATION:

Concern over the potential financial impact of proposed environmental initiatives on the city's budget.

CONTACT PERSON:

Jane Dick, Public Information Officer, Board of Commissioners' Office, City of Winnipeg, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-4624.

DESCRIPTION:

The newsletter on environmental issues is one of a series of eight on City budget topics. The intent of the newsletter is not to give an indepth analysis of the various issues but to provide a general description of the main issues, their impact on the budget and ways that the office worker and general public can help keep municipal costs down. The anticipated cost of environmental initiatives over the next five years is \$200 million. Topics covered in the newsletter include the following: drinking water, water pollution, energy, elm trees, hazardous/special waste, solid waste, air pollution, ozone depletion, environmental review of City Hall purchasing policy and the annual report on environmental issues.

DOCUMENTATION:

City of Winnipeg (1991) **The City of Winnipeg Budget Topics: Environmental Issues**, Volume 1, No.8.

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INITIATIVE:**4.3 Environmental review of City Hall****CURRENT STATUS:**

Conceptual design

ADMINISTERED BY:

Interdepartmental Task Force

STAFF:

Secondment from 5 departments

ORIGIN/MOTIVATION:

Many environmental initiatives had been proposed by staff and Councillors but there had been no overall coordinated review of City Hall environmental performance. There was also concern that the City should set an example for businesses and residents of the City because of the establishment of the new Centre for Sustainable Development in Winnipeg.

CONTACT PERSON:

Glenn F. Nakauchi, Contracts Officer, Purchasing Department, City of Winnipeg, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2284.

DESCRIPTION:

Council established a Task Force in the summer of 1990 to conduct the review. The Task Force consists of some of the same members from the previously established CFC Task Force and includes members from the Purchasing Department (for purchasing policy issues), the Waterworks, Waste and Disposal Department (for waste disposal and recycling policy), the Personnel Department (for employee participation), the Civic Properties Department and the Energy Management Coordinator. The review contains short, medium and long term recommendations and addresses the reduce, reuse, recycle and recovery methods of improvements. The topics covered include: office paper recycling, paper use reduction, recycling of newspapers and other office paper products, use of environmentally friendly cleaning and building products, reduction in energy use, indoor air quality issues, hazardous waste issues, ozone depleting substances, transportation, and environmentally responsible procurement. The expected completion date for the Task Force's report is the summer of 1991.

DOCUMENTATION:

Report from Research and Policy Analysis Branch to Board of Commissioners, September 4, 1990, Position of Environmental Coordinator.
Report of the Executive Policy Committee, June 13, 1990, Task Force to Conduct a Coordinated Environmental Review of City Hall, File WT-1.3.

INITIATIVE:

4.4 Environmentally Friendly Purchasing Policy

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Purchasing Department

COUNCIL APPROVAL:

1990

ORIGIN/MOTIVATION:

Council had already undertaken some environmental purchasing initiatives. For example, Council had banned the purchase of mahogany and teak products to show concern for rain forests. Two reports to Council had also recommended the development of an environmental purchasing policy: the Waste Minimization and Recycling Action Plan and a report from the Task Fore to Conduct a Coordinated Environmental Review of City Hall.

CONTACT PERSON:

Glenn F. Nakauchi, Contracts Officer, Purchasing Department, City of Winnipeg, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2284.

GOALS/OBJECTIVES:

In order to increase the development and awareness of environmentally sound strategies, the City will, wherever possible and economical, provide for the expanded use of products and services that have the least harmful impact on the environment without significantly affecting the intended use of the product or service. It is recognized that life cycle analysis is required to determine the total environmental and cost impact of such products and services, and that such analysis will be a continuing process keeping pace with technological and industrial development. As an example of life cycle analysis, it may be less expensive to purchase environmentally friendly cleaning solvents because their costs of disposal would likely be lower. Some products may also have significant revenue potential from recycling or reuse.

DESCRIPTION:

The City's policy largely reinforces past practices. For example, the City had switched from carbon zinc to alkaline batteries several years earlier for economic and safety reasons. The recommendations of the purchasing policy are:

1. That all departments, in conjunction with the Purchasing Department, shall review their specifications for goods and services to ensure that wherever possible and economical, specifications are amended to provide for expanded use of products and services that have the least harmful impact on the environment without significantly affecting the intended use of the product or services.
2. That the City base its purchasing decisions on quantifiable and verifiable evaluations of environmental and economic concerns, and not pay any premium nor show any arbitrary preference for purportedly environmentally sound products or services in the competitive bidding process.

The first recommendation expands on a purchasing principle formulated by ACCESS (the Association of Canadian Cities for Environmentally Sound Strategies). Some additional resources will be required to deal with the policy such as funds for testing, research and participation in the activities of such groups as ACCESS. It is estimated that, on average, approximately 0.1 person-years of Purchasing Department staff time will be required to evaluate a commodity group initially and 0.02 person-years per year will be required to maintain and update information. Without the addition of new staff, only about two or three major commodity groups could be evaluated per year.

PROBLEMS/SUCCESES:

It is not possible to translate all environmental life cycle costs, such as CO₂ emissions, into economic terms. Manufacturers who claim that their products are "environmentally friendly" frequently do so based on the environmental impact of their product for only a portion of its life cycle. Another problem with environmental purchasing policies is that there are regional differences in the supply and demand of products and in costing structures which means that policies that are feasible in one region are not feasible in others. For example, in Winnipeg, waste disposal costs are very low in comparison to costs in Toronto. Although Winnipeg has lagged behind a few of Canada's other municipalities in implementing its policy, this is not necessarily a problem because it

permits Winnipeg to evaluate what is working and what is not.

DOCUMENTATION:

Report from the Purchasing Department to the Commissioner of Finance and Administration, October 16, 1990, **The City of Winnipeg Purchasing Policy with Respect to Sustainable Development and Environmental Issues.**

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INITIATIVE:

4.5 Sludge Disposal on Land

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Waterworks, Waste and Disposal Department

BUDGET:

\$13 million (\$1984)

ORIGIN/MOTIVATION:

The previous sludge treatment process had generated public complaints about odours from residents adjacent to the City's sludge drying beds and from motorists on highways close to the beds. Another problem was that the drying beds were in an adjacent municipality and that none of the farmers who used the dried sludge were from that municipality.

COUNCIL APPROVAL:

1984

CONTACT PERSON:

Alan G. Stephen, Branch Head, Planning and Development, Waterworks, Waste and Disposal Department, City of Winnipeg, 1500 Plessis Road, Box 178, Transcona P.O., Winnipeg, Manitoba, R2C 2Z9, (204) 986-4487.

DESCRIPTION:

The sludge dewatering facility opened in 1990. It replaces the use of sludge drying beds located in an adjacent municipality. Centrifuges separate liquid from the stable sludge, producing a product that has at least a 20% solids content.

PROBLEMS/SUCCESESSES:

Sludge from the de-watering facility seems to produce a more intrusive odour than sludge left on the drying beds. There have been complaints from residents adjacent to farmers' fields where the sludge has been applied. The City is currently investigating the problem.

DOCUMENTATION:

City of Winnipeg, Works and Operations Division, Waterworks, Waste and Disposal Department (1990) **Winnipeg's New Sludge Utilization Program.**

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INITIATIVE:

4.6 Establishment of an Environmental Coordinator position

CURRENT STATUS:

On hold

ORIGIN/MOTIVATION:

Proposal made by a community committee.

CONTACT PERSON:

Brian Gaber, Energy Management Coordinator, City of Winnipeg, 3rd Floor, Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2339.

DESCRIPTION:

The proposal calls for the coordinator to report directly to Council's Executive Policy Committee on:

1. the prioritization of current environmental issues;
2. the monitoring and chronicling of ongoing environmental issues; and
3. the making of recommendations to Executive Policy Committee and Council relating to the environmental practices of the City.

PROBLEMS/SUCCESES:

City staff recommended that a position of Environmental Coordinator not be established until there has been a comprehensive review of departmental environmental activities. This review is currently under way.

DOCUMENTATION:

Report from Research and Policy Analysis Branch to Board of Commissioners, September 4, 1990, **Position of Environmental Coordinator.**

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INITIATIVE:

4.7 Larvicide Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Parks and Recreation Department

BUDGET:

\$520,962

ORIGIN/MOTIVATION:

Public concern over use of chemical insecticides to control adult mosquitoes.

CONTACT PERSON:

J.R. Hreno, Director of Regional Parks and Operations, Parks and Recreation Department, 2799 Roblin Blvd., Winnipeg, R3R 0B8, (204)

DESCRIPTION:

There are 38 different species of mosquitoes in the City. A computerized data base has been created in-house to generate a breeding site information system. When each inventoried breeding site is surveyed, information is compiled on its size, presence of water, presence of breeding, chemical application and larval identification (if any). The most common nuisance species breed in transient rainwater pools of 2 to 3 weeks duration. Disease-carrying species breed in all types of semi-permanent and permanent aquatic habitats. Larviciding of all known breeding sites within the City is carried out each spring and in the summer, after each heavy rainfall. Conditions during the spring are favourable for the application of biological larvicides with their short residual activity times (1-2 days). About 30% of the spring application is biological and less than 10% of the combined spring and summer application.

PROBLEMS/SUCCESSSES:

Biological control is not a solution by itself. While chemicals work immediately upon application, biological agents may not always be successful because they can be washed off by rains or become inactive during cold spells. Biological controls are also three to four times more expensive than chemical controls.

DOCUMENTATION:

R.M. Gadawski (1991) **Annual Report on Mosquito Surveillance and Control in Winnipeg - 1990**, Report prepared for the Insect Control Branch, Parks and Recreation Department, City of Winnipeg.

ICURR Intergovernmental Committee on Urban
and Regional Research
Comité intergouvernemental de recherches
urbaines et régionales

INITIATIVE:

4.8 Establishment of an Energy Management Coordinator position Implementation

CURRENT STATUS:**REPORTS TO:**

Commissioner of Works and Operations

BUDGET:

\$95,000

STAFF:

1

ORIGIN/MOTIVATION:

Establishment of the position was recommended by an Administrative Task Force on Energy Conservation.

CONTACT PERSON:

Brian Gaber, Energy Management Coordinator, City of Winnipeg, 3rd Floor, Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2339.

COUNCIL APPROVAL:

1984

DESCRIPTION:

The Coordinator is responsible for the management of energy conservation initiatives in the City.

PROBLEMS/SUCCESES:

The responsibilities of the position have expanded in the last year to include environmental issues, such as Chairing the CFC Task Force and the Task Force preparing an environmental review of City Hall.

DOCUMENTATION:

Task Force on Energy Conservation (1981) Report and Recommendations, January 1981. Report to the Executive Policy Committee, February 1, 1984, Energy Conservation - Task Force Report - Establishing Position of Conservation Officer, File EN-1.

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INITIATIVE:

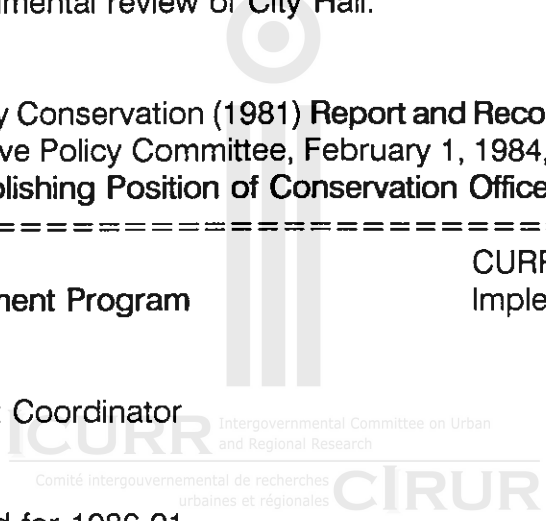
4.9 Energy Management Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Energy Management Coordinator



BUDGET:

\$3.5 million estimated for 1986-91

ORIGIN/MOTIVATION:

In 1981, an internal Task Force on Energy Conservation recommended the implementation of a strategy for energy conservation in the City.

CONTACT PERSON:

Brian Gaber, Energy Management Coordinator, City of Winnipeg, 3rd Floor, Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2339.

COUNCIL APPROVAL:

1981 (commenced 1985)

DESCRIPTION:

The energy management program saved the City \$2.5 million between 1986 and 1990 (over base year 1984). The average return on investment for energy projects being monitored between 1986 and 1989 was about 47%. The initial phase of the Energy Management Program has a goal of achieving a 10% decrease in building energy costs. However, the energy costs for all city buildings have only been reduced by 8.5% since 1985. Other municipalities in Western Canada seem to be performing better. For example, Edmonton has saved \$3.0 million annually since 1978 (compared to Winnipeg's \$0.8 million annually in 1990) and Calgary has saved a total of \$11 million since 1982. Overhead costs for the Energy Management Program are partially recovered through a 10% overhead charge levied against the cost of each energy conservation project in each department.

INITIATIVES:

A wide variety of initiatives have been implemented or are under consideration in over 200 facilities. A selection of those initiatives includes the following:

1. Energy audits (implementation)
2. Computerized energy management systems (implementation)
3. Development of energy conservation guidelines for new buildings (conceptual design)
4. Energy conservation and analysis of alternative fuels for the City's vehicle fleets and transit buses (conceptual design)
5. Development of guidelines for solar energy subdivisions (conceptual design)
6. Creation of a Citizen Liaison Committee to establish a link between the City, private sector and the general public (conceptual design)
7. A newsletter to provide feedback to building operators on how well their buildings are performing, Energy Management Program results, etc. (conceptual design)
8. Development of operational manuals for those buildings that have already been retrofitted with energy conservation devices (conceptual design)
9. Monitoring and maintenance of energy conservation equipment (to supplement building operators' responsibilities)
10. Reduced thermostat settings (implementation)
11. Ventilation system and electric hot water heater shutdowns during low use periods (implementation)
12. Replacement of regular fluorescent lamps and ballasts with low energy lamps and ballasts (implementation)
13. Replacement of electric heaters with natural gas heaters (implementation)
14. Waste heat recovery (implementation)
15. Water recycling in compressors to reduce consumption (implementation)
16. Computerized load systems and computerized parking lot plug cycles (implementation)
17. Automatic shut-off shower head replacements (implementation)
18. Installation of low emissivity reflective ceilings in ice arenas (implementation)

19. Additional insulation in buildings and on hot water heating pipes (implementation)
20. Improved efficiency of steam boilers (implementation)

PROBLEMS/SUCCESES:

Some delays in implementation of projects may be experienced because of the energy management coordinator's commitment to other initiatives such as the Environmental Review of City Hall, CFC Reduction, Demand Side Management.

DOCUMENTATION:

City of Winnipeg (1988) **Energy Management Program (Buildings), Progress Report, 1986-1987.**

Report to the Executive Policy Committee from the Research and Policy Analysis Branch, September 13, 1990, **Energy Management Program - 1986-1989 Progress Report.**

INITIATIVE:

4.10 Environmental Impact Reviews of City projects

CURRENT STATUS:

Discontinued

ADMINISTERED BY:

Works and Operations

ORIGIN/MOTIVATION:

A change to the City of Winnipeg Act in 1974 requiring that an Environmental Impact Review (EIR) be undertaken for any public work which "may significantly affect the quality of the human environment".

CONTACT PERSON:

R.J. McRae, Commissioner of Works and Operations, City of Winnipeg, 3rd Floor Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2378.

DESCRIPTION:

In 1974, the Department of Environmental Planning formulated some general guidelines on methodology and content of EIR studies and recommended the creation of an Environmental Impact Review Committee. These guidelines were adopted by Council and followed until 1978 when, in light of changes made to the City of Winnipeg Act in 1977, the reviews were discontinued. The 1977 changes made environmental reviews optional rather than mandatory. Therefore, at this point in time, the City of Winnipeg does not have its own Environmental Review Process. However, the Provincial Manitoba Act has provisions for Environmental Impact Assessments. There are also provisions for municipalities to be exempted. Under the City of Winnipeg Act, Council may require a report on the environmental impact of a proposed public work. Hopefully, in the future, cities will have their own Environmental Assessment process in place.

DOCUMENTATION:

Memorandum from the Chairman of the Environmental Impact Review Committee to the Commissioner of the Environment, December 14, 1977, **Review of Guidelines for the Preparation of Environmental Impact Reviews.**

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INITIATIVE:

4.11 Offer to host Manitoba's hazardous waste management facility

ISSUED BY:

City Council, 1990

CURRENT STATUS:

Submitted

ORIGIN/MOTIVATION:

A number of reasons were cited for making the offer:

1. Over 80% of the hazardous waste produced in Manitoba is generated in Winnipeg.
2. Significant amounts of hazardous waste enter Winnipeg's sewer system and landfill sites in an untreated form.
3. Transporting hazardous waste long distances increases the risk of release of these materials.
4. A hazardous waste transfer station is likely to be built in the Winnipeg area in any case, a facility where most of the risks surrounding hazardous waste takes place.
5. Winnipeg does not currently have hazardous waste management capability, which discourages a number of industries from considering Winnipeg as a location.
6. A \$30 million investment and some 30 jobs will be created in the Winnipeg area if the facility is sited in the City.

CONTACT PERSON:

A.G. Stephen, Branch Head, Planning and Development, Waterworks, Waste and Disposal Department, City of Winnipeg, 1500 Plessis Road, Box 178, Transcona P.O., Winnipeg, Manitoba, R2C 2Z9, (204) 986-4487.

DESCRIPTION:

The Manitoba Hazardous Waste Management Corporation identified four potential City-owned sites within the City of Winnipeg as being suitable for further consideration as the site of a treatment and disposal facility. A staff report on the possibility of siting such a facility in the City indicated that it would provide an opportunity to create a unique model of urban environmental responsibility, as well as being an asset in attracting business and industry. Council invited the Corporation to make presentations on the proposal to Committees of Council and authorized further investigations of one or more of the potential sites. The siting process is continuing.

DOCUMENTATION:

Report of the Committee on Works and Operations, Clause 6, June 26, 1990, **Project Proposal of the Manitoba Hazardous Waste Management Corporation, File GF-4.**

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INITIATIVE:

4.12 "Green Bus" Campaign

CURRENT STATUS:

Evaluation

ADMINISTERED BY:

Winnipeg Transit

BUDGET:

\$100,000

ORIGIN/MOTIVATION:

The purpose of the campaign is to increase public transit ridership by emphasizing environmental benefits. Past campaigns have focused on worry-free driving and economic benefits.

CONTACT PERSON:

Nick Iafolla, Superintendent of Customer Services, Winnipeg Transit, 421 Osborne St., Winnipeg, Manitoba, R3L 2A2, (204) 986-5736.

DESCRIPTION:

Ten Winnipeg Transit buses have been painted green and white as part of the campaign and there has been a major publicity effort in newspapers, transit shelters, bus boards and television ads. The bus boards display the following message: "We're on the route to a cleaner environment. Get on board!" The objectives of the campaign are:

1. to increase awareness of the environmental advantages of riding with Winnipeg Transit;
2. to increase ridership through the environmental merits of Winnipeg Transit;
3. to enhance the image of Winnipeg Transit as a concerned responsible corporate citizen.

PROBLEMS/SUCSESSES:

An evaluation of the campaign found that 4% of those surveyed felt that they were more likely to use transit as a result of the campaign. After the campaign, 51% of the surveyed group felt that transit was environmentally friendly versus only 30% before the campaign.

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INITIATIVE:

4.13 Social Development Policy

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

An inter-departmental administrative committee.

ORIGIN/MOTIVATION:

The City's 1986 official plan was approved on the condition that the City develop a social component for inclusion in the plan. In 1989, a City Councillor requested that Planning and Community Services develop a planning process that would address present and future social needs and prioritize the needs to be addressed in the next five years.

CONTACT PERSON:

Tom B. Yauk, Commissioner of Planning and Community Services, City of Winnipeg, 3rd Floor Administration Building, Civic Centre, 510 Main Street, Winnipeg, Manitoba, R3B 1B9, (204) 986-2376.

DESCRIPTION:

Comprehensive social development planning policy is viewed as a systematic, progressive approach toward addressing basic human needs within communities and along a course of action adopted by the government. Work on the policy to date has included a review of social policy in 15 North American cities, documentation of existing City social programs and/or services, a review of the definition of a comprehensive social development policy, a review of the six basic human needs identified by the United Way of America, and identification of those areas in which the City provides services to fulfil those needs. The preparation of a social development policy is seen as a Healthy Communities initiative. The City supports the Healthy Communities Project but has not endorsed it formally because of the possible cost implications.

DOCUMENTATION:

Report from the Commissioner of Planning and Community Services to the Committee on Planning and Community Services, November 1, 1990, **Comprehensive Social Development Policy for the City of Winnipeg.**

INITIATIVE:

4.14 Waste minimization and recycling program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Waterworks, Waste and Disposal Department

CONTACT PERSON:

T.J Kuluk, Solid Waste Disposal Planning Engineer, Waterworks, Waste and Disposal Department, City of Winnipeg, 1500 Plessis Rd., Box 178, Transcona P.O., Winnipeg, Manitoba, R2C 2Z9, (204) 986-4482.

DESCRIPTION:

The following waste minimization and recycling initiatives are currently in operation in the City. Where possible, the 1990 expenditures on each initiative are provided.

1. Backyard composting (\$10,000)
2. Public information campaign on solid waste, including waste minimization and recycling (\$35,000)
3. Purchasing policy study (\$5,000 to ACCESS)
4. Christmas Tree chipping program (\$1,000)
5. Blue bag curbside recycling pilot project for newspaper, glass bottles, aluminum, tin cans and plastic soft drink bottles (\$35,000 awarded to a non-profit agency)
6. Recycling depots (\$40,000)
7. Reuse of milled asphalt in-house or in conjunction with construction projects.
8. Recycling of bulk crushed asphalt and concrete.
9. Recycling of waste oil from City operations.
10. Recycling of unchlorinated waste solvents.
11. Increase of the tipping fee at the City's landfill by \$2.00 to \$20.00/tonne in 1990 and use of the \$2.00 for recycling efforts in the City.

It is anticipated that the following initiatives will be implemented during 1991.

1. Office paper recycling in City buildings.
2. Establishment of a position for a Waste Reduction Coordinator.
3. Leaf composting pilot project.
4. Market development and funding options.
5. Wood chipping pilot project.

PROBLEMS/SUCCESES:

The pilot curbside recycling project has been very well received by the public. Areas of the City which do not yet have it are requesting the service. A non-profit organization provides curbside newspaper collection services for 16,000 homes, in collaboration with the Winnipeg Free Press, the Winnipeg Sun and Abitibi-Price, at no cost to the City. A Waste Minimization Study prepared for the City in 1990 found that the average gross program cost for curbside recycling programs was about \$220/tonne and that a program for Winnipeg with similar costs would require funding of about \$4 million per year. Winnipeg could not afford a program of this magnitude. Winnipeg's landfill site has capacity remaining for almost 50 years. The City decided instead to concentrate on promoting and providing assistance to public and private recycling enterprises without undue reliance on public sector financing.

DOCUMENTATION:

Waste Minimization and Recycling Program Progress Report to February 6th, 1991.

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INITIATIVE:**4.15 Sustainable Development Component in Plan Winnipeg Review**ADMINISTERED BY:
Planning DepartmentCURRENT STATUS:
Conceptual design

ORIGIN/MOTIVATION:

The City of Winnipeg Act requires that the City's official plan be reviewed every five years.

CONTACT PERSON:

Director of Planning, City of Winnipeg, 395 Main St., Winnipeg, Manitoba, R3B 3E1, (204) 986-5155.

DESCRIPTION:

The Plan Winnipeg Review will focus on the following five major issue areas: urban development management, economic development, environmental management, social equity and the urban image. These issue areas reflect the requirements established by the City of Winnipeg Act and the Statement of Provincial Interests in the Review. The provincial statement calls upon Plan Winnipeg to give regard to and reflect the principles of sustainable development. The Province believes Plan Winnipeg would be strengthened by giving greater regard to the needs of the City's disadvantaged and target groups, the protection of the City's natural and built resources, and the issue of economic development for Winnipeg. The Statement of Interests lists the following key areas of interest:

1. Environmentally sound and economically sustainable development.
2. The need for a document which is more strategic and visionary. It should not only consider physical land use elements, but give equal consideration to social, economic, environmental and financial concerns and their influence on the physical components of Plan Winnipeg.
3. Continued emphasis on urban growth management.
4. Continued emphasis on community renewal and revitalization.
5. The inclusion of social development policies which address the needs of the City's disadvantaged and target groups, and emphasize the well-being of all the City's citizens in terms of public safety and security.
6. The need for environmental management and protection of natural areas, sensitive lands, heritage resources, scenic lands and public open spaces.
7. Protection and enhancement of the City's waterways.
8. Transportation policies which ensure the safe and efficient movement of goods, services and people, the effective use of financial and capital resources, the orderly growth and development of the City consistent with the Plan's containment policies, and the reduction of reliance on the private automobile.

- 9. Responsible financial management of the City.
- 10. The application of provincial land use policies.
- 11. Involvement of the public in developing a vision, identifying issues and in shaping objectives, policies and general strategies.

It is expected that a draft of the plan will be ready for presentation to Council in 1992.

PROBLEMS/SUCCESES:

The province is considering inserting an environmental section into the Planning Act. If these changes are approved, they may impact the new plan before its completion.

DOCUMENTATION:

Manitoba Urban Affairs (1990) **Statement of Provincial Interests in Plan Winnipeg Review.**

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INITIATIVE:

4.16 Winnipeg Core Area Initiative

CURRENT STATUS:

Implementation

BUDGET:

1981-86 - \$96 million (split equally among the federal, provincial and City governments);
1986-91 - \$100 million (split equally among the three levels of government)

ORIGIN/MOTIVATION:

During the 1960s and 1970s, it became apparent that Winnipeg's inner city needed a comprehensive revitalization to relieve economic, physical and social disparities that had developed in post-war years.

CONTACT PERSON:

Roy P. Darke, Director of Planning, City of Winnipeg, 395 Main St., Winnipeg, Manitoba, R3B 3E1, (204) 986-5155.

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DESCRIPTION:

The Core Area Initiative consists of programs and projects designed to revitalize 10 square miles of the urban core and improve economic opportunities for its residents. The results of the first phase of the Initiative between 1981 and 1986 included the following:

- 1. Construction of more than 460 residential units and the development of an additional 240 private market housing units.
- 2. Home repairs to more than 3,600 housing units.
- 3. Redevelopment and revitalization of about 20% of the historically significant buildings in the Exchange District.
- 4. Generation of \$30 million in public and private capital investment in key neighbourhood areas.
- 5. Involvement of more than 100 private sector employers in employment and training programs.

The second phase of the project consists of 13 separate programs that include such initiatives as industrial and entrepreneurial support, riverbank enhancement, neighbourhood and community development, home repair programs, home ownership incentives, training and employment programs and the provision of small business support services.

PROBLEMS/SUCCESES:

The initiative has been effective in delivering services which can benefit from tripartite cooperation such as employment projects and major land developments.

DOCUMENTATION:

Winnipeg Core Area Initiative (1986) **Canada-Manitoba-Winnipeg Tripartite Agreement, 1986-1991.**

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ICURR Intergovernmental Committee on Urban
and Regional Research
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urbaines et régionales **CIRUR**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Public Works Department

CONTACT PERSON:

Daniel Suzuki, Commissioner of Public Works, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2420.

DEFINITION OF SUD:

Development that can be supported by the environment without negatively affecting it.

INITIATIVES:

1. Storm water management standards for all new developments (implementation)
2. Street light conversion to high pressure sodium (funding assistance provided by Ontario Hydro) (implementation)
3. **Creation of a staffing position for an Energy Auditor (implementation)**
4. Waste management program (implementation)
5. Master Watershed Plans (implementation)
6. City's water billing practices have been altered so that, rather than having the price of water decrease as the amount consumed increases, the price now remains the same (implementation)
7. A bylaw that restricts lawn watering during times of low rainfall and hot weather (implementation)
8. Separation of combined sanitary and storm sewers (completed)
9. Conversion of light trucks in City's fleet to natural gas (pilot project)
10. **Energy conservation program (implementation)**

COMMENTS:

Kitchener was the first community in North America to have a city-wide Blue Box recycling program. Many of the ingredients for achieving sustainable development are not under the control of local municipal government but rather are in the hands of regional government, such as water supply and sewage treatment.

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ORGANIZATIONAL UNIT:

1.2 Parks and Recreation Department

CONTACT PERSON:

Frederick S. Graham, Commissioner of Parks and Recreation, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2390.

DEFINITION OF SUD:

The progressiveness of the community contributes to sustainable urban development.

INITIATIVES:

1. **Volunteer program (implementation)**
2. Internal Environment Committee that reviews the Department's programs (implementation)
3. Use of creek water to irrigate flower beds as much as possible in order to conserve water (implementation)
4. Use of drought resistant woody plants and perennials as ground covers in low maintenance areas rather than annuals (implementation)
5. Use of wood chips and bark mulch on planting beds to reduce evaporation (implementation)
6. Use of mineral fibres in container plantings to improve water retention (implementation)
7. **Naturalization Study (completed)**
8. Use of Integrated Pest Management principles (implementation)
9. Use of organic fertilizers on turf areas (pilot project)
10. Use of slow release fertilizers on lawn areas to minimize excess nitrogen run-off (implementation)
11. Branches and prunings are chipped and returned to planting beds (implementation)
12. Lawn leaves mulching program (implementation)

COMMENTS:

By its nature, the Department is an advocate for the environment.

ORGANIZATIONAL UNIT:

1.3 Planning and Development Department

CONTACT PERSON:

T. Brock Stanley, Director of Planning, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2302.

DEFINITION OF SUD:

The concept embodies three components, each with equal weight: 1. Development, 2. Quality of Life and Environment, and 3. Economics. There are linkages among all three components. For example, you must have development in order to foster healthy economic activity in a community which in turn contributes to a community's quality of life and its ability to support environmental programs.

INITIATIVES:

1. Sustainable development component to new Official Plan (Final Draft expected in 1992) (conceptual design)
2. Intensification study (completed)
3. **Designation of Environmentally Sensitive Policy Areas and Ecologically Significant Areas in current Official Plan (implementation)**
4. All developers must submit a Grading and Tree Saving Plan which describes the treed areas on their land, identifies the location of each tree to be saved and describes the methods by which the trees or treed areas will be saved (implementation)
5. **Environmental Assessments may be required for construction of facilities/roadways impacting Ecologically Significant Areas (implementation)**
6. Developers are encouraged to design the maximum number of east-west streets in plans of subdivision to ensure maximum south wall exposure during the winter months (implementation)
7. Establishment of a heritage planning function in the Department (by 1992) (conceptual design)

COMMENTS:

The Planning and Development Department has deliberately avoided the use of the word "sustainable development" in the documentation for its new Official Plan because of confusion over the meaning of the term. However, the concept will be embodied in all parts of the plan. In the area of water resources management, the City of Kitchener was one of the first communities in Southwestern Ontario to prepare its own watershed studies. The City and a developer financed the first study, which was expected to have a strong engineering component with some environmental input. The final report ended up having an equally strong environmental component. The results of this study led the Ministry of Natural Resources, the Grand River Conservation Authority and the Region to completely revise their terms of reference for watershed studies and strengthen the environmental component. These agencies have taken over the financing role for watershed studies.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 Environmental Committee

DATE ESTABLISHED:

1991

ORIGIN/MOTIVATION:

The idea for the Committee arose from a staff recommendation to Council that an Advisory Committee would be helpful in the preparation and implementation of the City's Environmental Strategic Plan.

REPORTS TO:

City Council or the appropriate Council Standing Committee.

CONTACT PERSON:

T. Brock Stanley, Director of Planning, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2302.

MEMBERSHIP:

The Mayor (ex officio), four Council members and five members of the general public.

FUNCTION/GOALS:

The terms of reference for the Environment Committee direct it to consider the environment in its broadest possible terms. As such, the Committee mandate includes all matters, activities and operations of every City Department that impact on the environment, as well as all related regulatory and enforcement functions of the City Administration. The responsibilities of the Committee are as follows:

1. To hear delegations, review reports on any subject falling within the Committee's mandate and, where appropriate, advise Council through the appropriate Standing Committee.
2. To provide guidance and direction to the City's Environmental Study Group in the preparation and implementation of the City's Environmental Strategic Plan.
3. To provide liaison between the community, including the development industry, and the City concerning environmental matters.
4. To develop short-term, intermediate and long-term environmental initiatives.

PROBLEMS/SUCCESSSES:

The Committee has only been in existence for two months and most of its work to date has been on the Environmental Strategic Plan. It has also advised Council on the issue of a proposed junk mail bylaw. The idea for the bylaw originated with a local environmental interest group which recommended that the City fine any junk mail distributors who placed junk mail at a residence displaying an anti-junk mail sticker. The Environmental Committee recommended that no action be taken because of concerns over how to enforce it and how to define junk mail, and because of an opinion by the city solicitor that the City has no authority to enact such a bylaw.

DOCUMENTATION:

Environmental Committee Terms of Reference in the Minutes of the Environmental Committee, February, 1991.

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ORGANIZATIONAL UNIT:
3.2 Environmental Study Group

DATE ESTABLISHED:
1990

REPORTS TO:
City Council through the Environmental Committee.

ORIGIN/MOTIVATION:
The Group's original task was to prepare a corporate environmental strategy, but this task expanded to include consideration of the environmental implications of both private and public activities in the City.

CONTACT PERSON:
Sam Clapman, Chair, Environmental Study Group, and Commissioner of Planning Development, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2310.

MEMBERSHIP:
Membership on the Study Group is limited to three representatives from each City Department. There are currently 10 representatives sitting on the Study Group.

FUNCTION/GOALS:
The function of the Environmental Study Group is to study and make recommendations to City Council on an Environmental Strategic Plan for the City which will include: an environmental Mission Statement, statements on City environmental philosophy or principles, identification of main functional and key activity areas, the establishment of strategic priorities, and an implementation strategy. The Study Group also functions as a vehicle to keep City Staff and Council fully informed in regard to the preparation and implementation of the Strategic Plan and to educate and inform Staff and Council in regard to environmental matters and activities throughout the Region and the Province.

DOCUMENTATION:
Environmental Study Group Terms of Reference in Minutes of the Environmental Committee, February 4, 1991.

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4. SELECTED INITIATIVES

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INITIATIVE:**4.1 Strategic Plan for the Environment****CURRENT STATUS:**

Conceptual design

ORIGIN/MOTIVATION:

An alderman recommended that staff prepare a list of environmental initiatives currently underway in the City. Staff expanded the request to include future as well as current initiatives.

CONTACT PERSON:

Sam Clapman, Chair, Environmental Study Group, and Commissioner of Planning Development, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2310.

DESCRIPTION:

The Environmental Strategic Plan will be the basis for reviewing the environmental responsiveness of all City practices and policies. It will be used to determine the priorities for future environmental initiatives and to set an agenda for implementing those initiatives. The draft Plan proposes the following Mission Statement for the City of Kitchener:

To ensure an environment that is ecologically sound and responsive to the health, safety and well-being of its residents by identifying and implementing policies and practices which impact positively on the environment.

The guiding principles to be embodied in the plan are as follows:

1. The City of Kitchener will work towards fulfilling its mission statement within the framework of provincial legislation.
2. While the City accepts a leading role, it must work in collaboration with both public and private interests within the community.
3. The environment includes air, land, scenic landscapes, water, plant and animal life, and anything made by human beings.
4. An ecologically sound environment implies an environment that is healthy and capable of sustaining all forms of life in a natural state.
5. An objective of the mission is to achieve a net gain in the quality of the environment. The guiding principle to this objective is to function in such a way as to ensure no net decrease in the quality of the environment.
6. Since the environment encompasses or touches upon all facets of urban life, all City Departments must be involved in using products and implementing policies and practices which are environmentally positive. It follows that environmentally negative actions will be eliminated or reduced.

A draft outline of the Plan covers the following key activity areas: storm water management, master drainage plans, water conservation, erosion and siltation control, water quality, flood plain management, sewer and utilities management, public education, pollution abatement and/or reduction, purchasing of environmentally friendly products, environmental assessment and legislation, reduction of pollution from transit and other municipal vehicles, reduction of liquid and solid waste, recycling efforts, handling of hazardous materials, spill clean-up, composting programs, litter control, rehabilitation of landfill sites, intensification management, aggregate extraction and rehabilitation, agricultural land management, conservation of natural areas, planning traffic and road patterns to minimize energy consumption and pollution, visual pollution, heritage planning, reduction of energy consumption, utilization of energy efficient products/designs, selection of fuels, consideration of alternate energy sources, monitoring of energy consumption, forest land management, management of Environmentally Sensitive Policy and Ecologically Significant Areas, conservation of natural areas (wetlands, wildlife habitats), public parks and leisure facilities, fertilizing and spraying policies, parkland acquisition, tree planting and scenic roads. There will be six public meetings held for discussion of the Plan. A public information package prepared for the meetings includes a description of 128 current environmental initiatives in the City and 107 issues for future consideration. The expected completion date for the Plan is October, 1991, after which an implementation phase will be initiated.

DOCUMENTATION:

City of Kitchener (1991) **City of Kitchener Strategic Plan for the Environment, Public Information Package.**

Minutes of the Environmental Committee, February 4, 1991.

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INITIATIVE:

4.2 Energy Conservation Program



CURRENT STATUS:

Implementation

ADMINISTERED BY:

Purchasing Division

CONTACT PERSON:

Chris Ford, Energy Auditor, Purchasing Division, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick Street, Kitchener, Ontario, N2G 4G7, (519) 741-2215.

INITIATIVES:

Energy management initiatives which have been implemented include: ceiling fans, automatic door closers, low air leakage garage doors, insulated garage doors, storm windows, waste heat recovery, pool covers, reduction of hot water temperatures, setback thermostats and timers, parking lot timers, block heater timers, low air leakage ventilation dampers, high insulation windows, additional building insulation, additional swimming pool insulation, additional hot water tank insulation, high efficiency lighting, the use of two speed motors, building energy management control systems and low water use

bathroom fixtures. Some of the energy management initiatives currently in the design stage include: high efficiency furnaces, automated building controls, a co-generation system and occupancy sensors. Additional energy management initiatives include the following:

1. Transit and fleet garages use an infra-red heating system that warms objects instead of the air, thus saving energy in facilities where large doors are continuously opening and closing (implementation)
2. No-idle policy for City vehicles (implementation)
3. City has purchased a fuel tanker truck to take fuel to City vehicles rather than having them started and moved to a stationary fuel island. The policy reduces cold starts, idling and moving units to the fuelling area (implementation)
4. Conversion of 36 City vehicles to propane and 22 vehicles to natural gas (implementation)
5. Solar heating facilities for two City pools (implementation)

PROBLEMS/SUCCESES:

While the City has made some progress in implementing solar heating initiatives, without external funding these projects would not be economically feasible. For the period 1980-90, the City initiated 81 different energy management projects for a cumulative savings of \$1.6 million on energy expenditures. Energy management planning will soon see greater emphasis placed on environmental concerns, although many changes being suggested to reduce environmental impact can cause increases in the use of energy. For example, the best replacement for CFC refrigerants currently available reduces the capacity of an air conditioner by 25%. This means that, to keep the same level of air conditioning, the City's summertime electricity demand would rise by 1/4. In the future, all energy management projects will have to be evaluated on a broader scope that includes evaluating the environmental impact as well as projecting the energy cost savings.

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DOCUMENTATION:

Chris Ford (1990) Energy Management Program: Total Review, August 20, 1990.

INITIATIVE:

4.3 Volunteer Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Parks and Recreation Department

BUDGET:

\$11,300 (to cover the cost of volunteer pins, thank you cards, staff training, volunteer training, newspaper advertisements, media packages, photographs, Volunteer Fair registration, art work and printing)

CONTACT PERSON:

Frederick S. Graham, Commissioner of Parks and Recreation, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2390.

DESCRIPTION:

A total of 3,141 volunteers assisted the Department with its programs during 1990. These consisted of the following:

1. Winter rink committees which establish and maintain outdoor rinks in their neighbourhood.
2. Neighbourhood associations which offer recreational programs for their community.
3. Summer playground committees which work in cooperation with the Department to run programs for children in playgrounds throughout the summer.
4. The Volunteer-in-Training program involves 13 and 14 year old students who assist in summer programs.
5. Miscellaneous committees which run various special events.
6. Volunteers in the Seniors Section assist with supervising recreational programs, driving homebound seniors to recreational programs, serving and preparing noon hour meals to senior diners, assuming responsibility for travellers on bus trips, arranging numerous special events and fund raisers, selling trip tickets, refreshments, meals and raffle tickets, filling out income tax forms for seniors on low incomes, decision-making on committees and Advisory Councils, teaching classes, helping peers with common life decisions, directing Lifestyle seminars and workshops, and presenting displays and public information sessions.
7. Volunteers in the Aquatics Section are 12-17 years old and assist with learn-to-swim classes.
8. Volunteers in the Athletics Section have primary responsibility for running minor sports in the City, including administrative duties, coaching, fund raising, tournament organization, and team management.
9. Volunteers in the Arts, Culture and Special Events Section assist in the organization of cultural performances, sales and exhibitions, workshops and special events.
10. The Leisure Buddy Program provides individual volunteer support to persons with a disability in order to enhance their participation in community recreation programs.

PROBLEMS/SUCCESSSES:

The program has been highly successful.

DOCUMENTATION:

City of Kitchener Parks and Recreation Volunteerism Committee (1990) **Kitchener Parks and Recreation Volunteerism Committee Annual Report 1990.**

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INITIATIVE:
4.4 Naturalization Study

CURRENT STATUS:

Completed

ADMINISTERED BY:

Parks and Recreation Department

CONTACT PERSON:

Frederick S. Graham, Commissioner of Parks and Recreation, City of Kitchener, City Hall,
P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2390.

DESCRIPTION:

As a result of this study, the Department of Parks and Recreation recommended that the City establish a goal to incorporate self-perpetuating natural landscapes into all areas of the open space system throughout the City of Kitchener. This includes the re-establishment of natural landscapes in places where presently they are not found; the preservation of existing woodlands, wetlands, and meadows; the expansion of existing natural areas; and the adoption of maintenance and management techniques which are responsive to natural processes, and will ensure the continued use of these natural areas for their recreational, educational, and ecological benefits. The study examined four City parks, representing different site and neighbourhood conditions, to determine the potential for naturalization or reforestation throughout the Kitchener Parks system. It also prepared implementation strategies for the naturalization of these sites, including concept plans, public meetings, construction drawings and specifications.

PROBLEMS/SUCSESSES:

Support for the study's recommendations has been expressed at three public meetings. Ultimately, the success of some projects will depend upon the acceptance of local residents.

DOCUMENTATION:

Hough, Stansbury, Woodland (1990) **Naturalization/Reforestation of Parks and Open Spaces, Final Report**, prepared for the Parks and Recreation Department, City of Kitchener.

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INITIATIVE:
4.5 Designation of Environmentally Sensitive Policy Areas and Ecologically Significant Areas in current Official Plan

ADMINISTERED BY:

Planning

CURRENT STATUS:

Implementation

CONTACT PERSON:

T. Brock Stanley, Director of Planning, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2302.

COUNCIL APPROVAL:

1979

DESCRIPTION:

Environmentally Sensitive Policy Areas (ESPAs) in the City's Official Plan are those which have been designated in the Regional Official Policies Plan and Ecologically Significant Areas (ESAs) are those which have been identified in the City's Master Plan for Parks, Open Space and Recreation Facilities. Development requiring a change in the legal use of land will not be permitted in or contiguous to ESPAs or ESAs where an Environmental Impact Statement (EIS) or an Environmental Analysis (EA) demonstrates that the change in the legal use of land would have a serious impact on the natural ecosystems. An EA will be required where a change in the legal use of land is proposed in, or continuous to, an ESPA or an ESA. In the case of an ESPA, an EIS as set out in the Regional Official Policies Plan is also required. Where an EIS and an EA are both required, the measures established in the EIS to prevent, change, mitigate or remedy the impact of the undertaking shall prevail as the minimum. In these instances, every effort will be made to coordinate the concerns of the Region and City to ensure that there is no duplication of effort. In any case, these studies can be combined into one document. In areas containing an ESPA or an ESA, an EA will be required for the preparation of a Secondary Plan or, where a Secondary Plan is not required, prior to approval of a Zoning Bylaw Amendment. An EA shall have regard to the requirements for an EIS in the Regional Official Policies Plan and the preservation guidelines in the City's Master Plan for Parks, Open Space and Recreation Facilities. Specifically, it shall:

- a. describe the proposed change in land use and the purpose and rationale for the change in use;
- b. identify, document and describe the existing environment, ecosystems and physical hazards, including: topography, hydrology, soils and geology, vegetation, forest cover, significant woodlots, micro-climate including wind and sun exposure, significant animal species, areas of visual quality or aesthetics, flood lands, steep slopes, organic soils, ground water recharge areas, buildings and structures of historical or cultural merit and/or architectural uniqueness and archaeological sites, social conditions, economic conditions, and cultural conditions;
- c. identify, document and describe the impact of the proposed change in land use on the existing environment and ecological systems indicating (1) the environment that will be affected, (2) the extent of the impacts or effects to be caused to the environment and (3) those adverse environmental effects which cannot be avoided or mitigated should the proposal be implemented;

KITCHENER

- d. indicate alternatives to the proposed action or change in land use and indicate the proposed methods and alternative methods by which the identified impacts or effects upon the environment may be overcome, prevented, changed, mitigated or remedied.

PROBLEMS/SUCSESSES:

Three EISs have been prepared for the City to date and these were submitted to the Regional Environmental and Ecological Advisory Committee for review since the City has no ecologists on staff.

DOCUMENTATION:

City of Kitchener Department of Planning and Development (1990) **Official Plan Consolidation**, as approved June 18, 1979 and updated to December 12, 1990.

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INITIATIVE:

4.6 Waste Management Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Public Works Department

ORIGIN/MOTIVATION:

The City took its first step towards city-wide Blue Box recycling in 1981 when the City's waste collection contractor proposed to implement a pilot recycling program if the City would extend the company's contract for a three year period. The pilot project was launched in 1981 and expanded to the entire city in 1983.

CONTACT PERSON:

Steve Gyorffy, Director of Operations, Public Works Department, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick St., Kitchener, Ontario, N2G 4G7, (519) 741-2410.

DESCRIPTION:

1. Blue Box recycling program for newspaper, glass, cans, corrugated cardboard and telephone books.
2. Backyard composting program.
3. City maintenance facilities have reduced solid waste by increasing bulk purchases.
4. Liquid wastes have been reduced by extending vehicle oil change intervals and reducing the use of anti-freeze.
5. Office paper recycling program for all City facilities.
6. Asphalt recycling program.
7. City's sign making operations reuse aluminum and steel sign blanks, portions of damaged materials for spare parts and ship unusable portions of damaged materials to recycling centres.

- 8. Paint drums returned to their supplier for refill.
- 9. Curbside Christmas tree and bagged leaf collection.
- 10. Apartment recycling.

PROBLEMS/SUCCESES:

In 1990, the City recycled 14.2% of its residential waste. The issue of glass separation is a problem for the recycling program because of the low price offered for unsorted glass.

DOCUMENTATION:

Steve Gyorffy (1987) **Achieving our Potential for Waste Reduction: Kitchener's Recycling Programme**, Paper presented at the 1987 International Public Works Congress and Equipment Show, American Public Works Association.

Paul Taylor and Jerry Powell (1983) "Waste Hauler Shows How to do Source Separation", **Resource Recycling**, November/December, p.14-15,40-41.

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INITIATIVE:	CURRENT STATUS:
4.7 Creation of a staffing position for an Energy Auditor	Implementation

ORIGIN/MOTIVATION:

Established in 1980 with funding assistance of the Ministry of Energy's Energy Auditor Program.

CONTACT PERSON:

Chris Ford, Energy Auditor, Purchasing Division, City of Kitchener, City Hall, P.O. Box 1118, 22 Frederick Street, Kitchener, Ontario, N2G 4G7, (519) 741-2215.

DESCRIPTION:

When the Ministry of Energy's funding program finished in 1986, the City continued to fund the Energy Auditor position. The Energy Auditor is responsible for identifying, recommending, implementing and monitoring energy and water management projects. The Auditor also monitors and evaluates service work performed by outside contractors under the computerized equipment maintenance program and reviews the design of new facilities for inclusion and implementation of energy features.

PROBLEMS/SUCCESES:

The responsibilities of the position have been expanded to include environmental issues. The City's fine paper recycling program was started by the Energy Auditor and the Energy Auditor is the coordinator for the Environmental Study Group. Responsibility for the City's water conservation activities was added in 1990.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Public Works

CONTACT PERSON:

J.D. Willis, Commissioner of Public Works and City Engineer, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8741.

DEFINITION OF SUD:

No firm definition in mind.

INITIATIVES:

1. **Waste reduction programs (various stages)**
2. Citizens' Recycling Committee (implementation)
3. Stormwater management requirements for new developments (implementation)
4. **Laurel Creek Watershed Study (under way)**
5. Naturalization program (implementation)
6. Turf Management program (implementation)
7. Water Conservation program (implementation)

COMMENTS:

Selling these programs to the public through publicity and education programs is very important.

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ORGANIZATIONAL UNIT:

1.2 Planning and Development

CONTACT PERSON:

Don Roth, Senior Planner, Planning and Development Department, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8756.

DEFINITION OF SUD:

Ensuring that future generations have the same resources and environment available to them that we do.

INITIATIVES:

1. **Subdivision Cistern Design and Implementation Program (pilot project)**
2. **Subdivision Grading, Erosion Control and Planting Plans (implementation)**

COMMENTS:

The sustainable development concept is embodied in City planning documents, but not used explicitly. The efforts of "Environment First" have gone a long way towards achieving sustainable development.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

2.1 Office of the Environmental Coordinator

1990

REPORTS TO:

STAFF:

Chief Administrative Officer

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CONTACT PERSON:

Brian Trushinski, Environmental Coordinator, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8708, fax number (519) 747-8760.

ORIGIN/MOTIVATION:

Establishment of the position and the office was requested by the Environment First Think Tank and approved by Council.

DESCRIPTION:

The duties of the Environmental Coordinator include:

1. responsibility for coordinating multi-jurisdictional and City department programs and projects on a diverse range of municipal environmental issues;
2. overseeing the planning and implementation of large scale environmental projects;
3. creating new community partnerships to protect, enhance, rehabilitate and better manage the natural environment (community stewardship); and
4. acting as a contact for the public, business and academic communities to refer to on environmental questions, suggestions and project ideas.

PROBLEMS/SUCSESSES:

A strong emphasis on stewardship and the devolution of work to community groups and private sector businesses has worked very well. In a few instances, it has not. For example, residents of an apartment building complained about garbage in a local creek. The City responded that although it could not address the problem immediately because of other priority environmental commitments, the City was willing to supply residents with garbage bags and would dispose of the garbage collected if the residents wanted to do something about the problem right away. The residents refused, claiming that it was not their responsibility, that somebody else had created the problem and that they paid taxes to the City for these services. To address the residents' concerns, the City contacted a local boy scout chapter and established an environmental partnership. The scouts cleared

up the creek and residents were invited to participate. Some residents participated and others donated food and beverages to the volunteers. The media has been very receptive of the City's initiatives and provided detailed coverage of events and programs. Multi-jurisdictional partnerships have also worked well to date (e.g. the Laurel Creek Watershed Study). Cooperation among City staff on inter-departmental issues has been good. Keeping the public informed about the City's environmental initiatives is very important in order to illustrate how City government is taking a proactive role. Education of this type might have helped relieve public anxiety over the amount of pesticides currently used by the City. In fact, the City has been using a seven-step cultural maintenance program called the Plant Health Care Program for several years and has successfully reduced its use of pesticides by 90% on its 550 acres of turf. Budget pressures have recently restricted expenditures on environmental initiatives, but other types of programs and initiatives have also been affected.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

3.1 Environmental Policy and Implementation Review Committee 1990

REPORTS TO:

City Council

ORIGIN/MOTIVATION:

The Committee was established to review existing policies and practices of the City and to develop options and strategies to implement Official Plan objectives regarding natural heritage conservation.

CONTACT PERSON:

Don Roth, Senior Planner, Planning and Development Department, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8756.

MEMBERSHIP:

Representatives from the Building and Development Industry, the Conservation Authority, an environmentalist, a public representative and City staff.

DESCRIPTION:

The policy areas reviewed by the Committee included: the Street Tree Planting Program, the Street Tree Bylaw, the Development Within Woodlots Policy, City owned woodlots and the Urban Drainage Policy. The Committee identified the benefits and deficiencies in each of these areas, made suggestions for improvements and evaluated the resource and staff implications of their suggestions. After receiving comments on a Discussion Paper that was presented at a public meeting and sent to other agencies, the Committee made a

number of recommendations, some of which are listed below:

1. That the Street Tree Planting Program be revised as follows:
 - a. that grouped or clustered plantings, plantings of median areas and cul-de-sacs, variable spacing of trees, grouped plantings at entrance roads and T-intersections, and the use of native species and shrubbery be utilized in the street tree planting program, as appropriate, and incorporated as planting techniques in the City's Subdivision Planting Plan requirements;
 - b. that a maintenance program be pursued to address the periodic watering and fertilizing of new boulevard trees;
 - c. that the homeowner's information letter be updated and revised to encourage stewardship and involvement in tree care and nurturing.
2. That a policy statement be prepared to set out the principles and guidelines as the basis for the Street Tree Bylaw in order to address such matters as acceptable tree sizes and species, standards and maintenance requirements.
3. That the Development Within Woodlots Policy be revised as follows:
 - a. that the responsibility for inspection and enforcement of the Policy be assumed by the Engineering Division;
 - b. that the Policy require the submission of a preliminary grading plan with the tree saving plan as a part of the subdivision review process;
 - c. that the Policy require the submission of a rehabilitation and naturalization plan to re-establish and stabilize disturbed edges adjacent to tree retention areas.
4. That a Woodlot Master Plan be prepared for the remaining undeveloped woodlots in the City.
5. That the Urban Storm Drainage Policy be updated.
6. That a review of the residential zoning categories be undertaken to determine the most appropriate zone to be applied to development in woodlots.
7. That Council accept the following principles in the City's approach to addressing woodlots:
 - a. that the City employ the principle of environmental integrity as the basis to identify and protect key woodlot ecosystems and their linkages;
 - b. that the City apply the principle of minimizing degradation where some form of development is approved in wooded areas in order to ensure maximum tree saving efforts and rehabilitation of disturbed areas.

DOCUMENTATION:

Report prepared by Don Roth, Planning and Development Department, June 4, 1990, **Environmental Policy and Implementation Review Committee - Discussion Paper.**

Report prepared by Don Roth, Planning and Development Department, January 11, 1991, **Environmental Policy and Implementation Review Committee - Final Report.**

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

3.2 Environment First Think Tank

1989

REPORTS TO:

City Council

ORIGIN/MOTIVATION:

The Mayor called for the establishment of a municipal think tank that would address environmental concerns in the City.

CONTACT PERSON:

Brian Trushinski, Environmental Coordinator, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8708.

DESCRIPTION:

Two teams, each comprised of seven staff members from all administrative levels, were established in 1989 to identify goals and strategies for the management of the following environments: creeks and storm water, flood plains, environmentally important areas, urban vegetation, and parks and open space developments. A feasibility evaluation for implementing the strategies examined their environmental benefits, cost effectiveness, political acceptability, multi-purposefulness and originality. Eighteen strategies were identified and subsequently classified as to whether an implementation stage was already underway, whether action should be initiated immediately, or whether further study and review was required. The members of the Think Tank recommended that environmental concerns be fully addressed first before any decision making and likened the concept to a localized application of "Think Globally, Act Locally." The Think Tank report was approved in principle by Council in 1989. As a result of the report, Council decided to incorporate the "Environment First" way of thinking into the Corporation's service provision and business approaches. Staff were directed to consider potential impacts of their tasks on the natural environment and to determine and carry out, if feasible and appropriate, alternative approaches that would not degrade or destroy the integrity of the environment. By the end of 1991, 91 environmental projects and programs had been undertaken and new working partnerships had been established within the community. A follow-up Think Tank in 1991 proposed the following Environment First Mission Statement for the City:

We, the Council and the employees of the City of Waterloo are committed to examining and assessing potential environmental impacts in all Corporation services and programs as part of decision making and to recommend appropriate actions that are achievable within our jurisdictional authority in order to optimize environmental benefit.

INITIATIVES:

Since the 1989 Think Tank report, the City has proposed or undertaken 91 initiatives that are representative of the "Environment First" approach. Some of the initiatives that have been implemented are described elsewhere in this report and not included in the following list:

1. Use of propane or natural gas or a dual fuel system (propane/gasoline or natural gas/gasoline) in a number of city vehicles.
2. Installation of low-emissivity ceilings in all arenas for an annual savings of \$1,000 per arena.
3. Installation of automated air change systems and water recirculation reclaiming systems in arenas/pools.
4. Replacement of incandescent lights with metal halide, high and low pressure sodium and mercury vapour.
5. Installation of capacitors to produce a power factor correction in one rink's refrigeration system
6. Reclamation of heat from refrigerator systems at some arenas.
7. Use of high efficiency electric motors and computerized controls in City facilities.
8. Study undertaken to identify a well as a source of non-potable water for street sweepers and soil and plantings watering (to be established 1991).
9. Distribution of water saving devices to each household in the City, in partnership with the Region, community groups and the University of Waterloo. Water saving kits include three water efficient faucet aerators, one shower head, two sets of toilet tank dams, installation instructions and materials and an evaluation questionnaire.
10. Retrofitting of City facilities with water efficient fixtures.
11. Requirement that all homes in new residential subdivisions have water saving fixtures installed, as a condition of draft plan approval.
12. Control of tent caterpillars manually rather than by chemical control.
13. Establishment of a Pesticide Task Force to investigate the future use of pesticides on all City-owned and private residential, commercial, industrial and institutional lands in Waterloo.
14. Implementation of a Plant Health Care Program that includes higher and better managed grass cutting, aeration of the soil, topdressing, overseeding, proper turf grass selection for intended uses, proper irrigation, dethatching, fertilizing using organic-based products, proper scheduling of use of turf areas and regular monitoring of turf conditions.
15. Naturalization of selected areas and parks in the City by replacing turf with shrubs, tree and other herbaceous materials.
16. Expansion of the existing Community Trail system.
17. Creation of a temporary "Port-a-Park" on a half acre of vacant land in the City core which is scheduled for development. Park contains a mini-play area, a sculpture, a wall mural and extensive planting beds, all of which are reusable and can be used in future port-a-parks.

WATERLOO

17. Cooperative projects with Boy Scouts and a community group to plant 3,400 trees in a City park and Conservation Area. The City prepared the sites while the Boy Scouts supplied and planted the trees.
18. Curbside collection and recycling of Christmas trees.
19. Cooperative project with the University of Waterloo, local residents and a public school to conduct an annual clean-up of a two acre urban woodlot and to implement a woodlot management plan prepared by the University.
20. Establishment of a working committee to investigate the regulation of trees on private property. Committee concluded that provincial legislation must be amended for the City to accomplish tree saving objectives on private lands and recommended interim measures such as community education and stewardship programs.
21. All local improvement projects that involve construction of new sidewalks or reconstruction of existing sidewalks must also include provision for boulevard tree planting.
22. Cooperative project with Union Gas Limited to develop a tree-lined promenade in a City park.
23. Cooperative project with a public school to clean up a local woodlot and plant trees supplied by the City.
24. Inclusion of an Environmental Report in the Annual Budget booklet distributed to City residents.
25. Construction of a new sanitary sewage pumping station that allows local residents to discontinue use of septic tank systems.
26. Hydrogeological investigation of the Waterloo portion of the Melitzer Creek Watershed to assess the feasibility of incorporating at-source infiltration and at-source water quality control in storm water management design of proposed developments.
27. Completion of the Melitzer Creek Master Drainage Plan and introduction of a preservation zone around wetlands.
28. Reduced mowing along watercourses promotes cooler water temperatures, encourages revegetated stream banks and aquatic habitat, traps in-stream debris and sediment, and reduces stream bank erosion.
29. Completion of a study to determine potential rehabilitation measures for storm water management ponds in an area of the city.
30. Completion of a study of industries that collected information on a number of environmental issues.
31. Special emphasis is being placed on the City's new business marketing strategies to attract technology-driven value added enterprises that do not negatively impact on the environment and wherever possible enhance the environment.

32. All new subdivision development applications are now required to demonstrate how they intend to satisfy a number of environmental site planning requirements, such as increased plantings to improve area micro-climate and air infiltration, reduction of hard surfacing, preservation of existing trees and shrubs, accommodation of outdoor recycling facilities, improvement of water infiltration, and establishment of low maintenance landscaping.
33. One industrial development in the City has incorporated a cistern for land and garden watering.
34. All new industrial and commercial developments are required to dedicate 2% of their total development site land (or a cash equivalent) to the protection of important natural areas and/or open spaces.
35. A 2% parkland dedication for all industrial and commercial developments is under consideration.
36. Completion of a study to identify existing available provincial legislation which legally protects employees who speak out on environmental concerns.
37. Approval of the first District Plan that incorporates Environment First Think Tank recommendations, such as open space dedications for creek channels, creek policies to maintain creeks in their natural condition, storm water, drainage and grading plans, subdivision planting schemes and lot development plan requirements and a requirement to evaluate development applications on the basis of environmental planning criteria.
38. Wherever possible, City purchases cleaning products that are phosphate free or biodegradable and encourages cleaning contractors to use environmentally friendly products as part of cleaning contracts with the City.
39. Cooperative project with local residents to naturalize a small neighbourhood park. Residents funded the project and planted all trees, shrubs, bushes and other groundcover while City staff prepared a naturalization plan and planting beds.
40. Hired an Environmental Approvals and Inspection Officer in 1989 who is responsible for reviewing plans and conducting inspections and enforcement of tree saving measures, development within woodlots policies, existing storm water management systems and sedimentation and erosion control.

PROBLEMS/SUCCESSSES:

During 1990, the original intent of the environment first ethic became misinterpreted by some members of the community as meaning "environment only". It was assumed that whatever business or service the City undertook, environmental concerns would be regarded by Council and Staff as being paramount to all other relevant professional concerns in the decision making process. It was believed by some that if the environment was not fully protected from proposed development and ecological integrity preserved, Waterloo was not living up to its environment first reputation. "Environment first" was being interpreted as meaning environmental preservation rather than conservation. To address this problem a second Think Tank exercise took place in 1991, comprising staff from all departments and administration levels who had had experience implementing environment-related projects during 1990. The Think Tank provided the following

clarification of the meaning of the "Environment First" concept:

"Environment First is a paradigm, a way of thinking that is applied in all City services whereby, as a guiding principle, environmental implications are fully considered with all other applicable issues such as economics, social need, and planning and engineering, as a priority to address throughout the decision making process. Environment First is intended to minimize potential human impacts/influence on the natural environment whenever and wherever practically and feasibly possible, however, it does not preclude priority consideration of other pertinent non-environmental issues particular to the project."

DOCUMENTATION:

Report prepared by Brian Trushinski for the Chief Administrator's Office, April 18, 1991, **Environment First 1990 Review Report.**

Report prepared by Kevin Plautz and Rob Deyman for the Planning Department, October 4, 1989, **Environmental Think Tank: Environment First Strategies.**

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ORGANIZATIONAL UNIT:

3.3 Pesticide Task Force

DATE ESTABLISHED:

1990

REPORTS TO:

City Council

ORIGIN/MOTIVATION:

Public concern over the use of pesticides.

CONTACT PERSON:

Brian Trushinski, Environmental Coordinator, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8708.

MEMBERSHIP:

19 members with representatives from environmental groups, universities, lawn care and horticultural associations, school boards, a private landscaper, a groundwater specialist, sport associations, the Guelph Turf Grass Institute, elected officials and staff.

DESCRIPTION:

The objective of the Task Force was to address the future use of lawn chemicals on public and private properties. The Task Force submitted a final report to Council in April, 1991, with the following recommendations:

1. That Council adopt as a goal the progressive reduction and eventual elimination of lawn chemical use within Waterloo and that educational means be used to reach this goal.

- 2. That Council endorse the City's Plant Health Care Program and the Task Force's 15 recommendations on turf management.
- 3. That Council endorse the Task Force's 7 recommendations for education strategies.
- 4. That Council initiate immediately a study which will enable the City to evaluate the effectiveness of the turf management and educational strategies recommendations.

PROBLEMS/SUCSESSES:

Similar to the Guelph and Cambridge pesticide task forces, Waterloo's task force was unable to reach consensus on whether lawn chemicals should be banned in the urban setting. The achievement of lawn chemical reduction in the urban environment will require further research and evaluation. The Task Force discovered that the City of Waterloo did not have legal authority to pass a bylaw which would restrict, regulate or ban the use of lawn chemicals on private property and concluded that more could be achieved with a "carrot than a stick".

DOCUMENTATION:

Report to Council prepared by the Pesticide Task Force, April 5, 1991, **Pesticide Task Force Report.**

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Laurel Creek Rehabilitation Project

CURRENT STATUS:

Implementation

BUDGET:

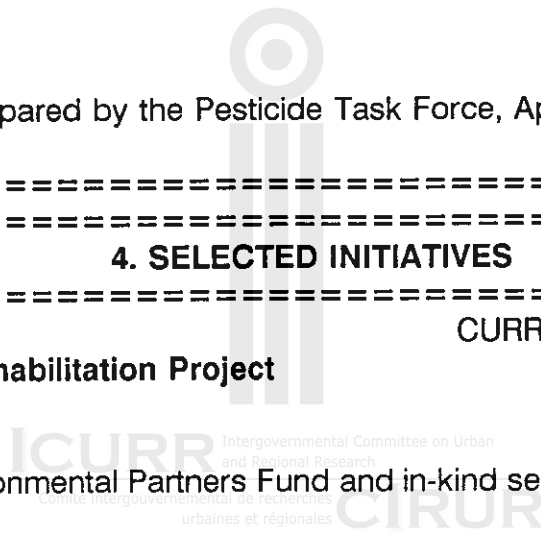
\$47,500 federal Environmental Partners Fund and in-kind services from municipality and Trouts Unlimited.

ORIGIN/MOTIVATION:

Proposal by the Mayor. Seen as a way to start rehabilitation of the creek before the Laurel Creek Watershed Study had been completed.

CONTACT PERSON:

Brian Trushinski, Environmental Coordinator, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8708.



DESCRIPTION:

This is a 15-20 year stream rehabilitation project covering 26 km. of Laurel Creek and 76 sq.km. of watershed area. The purpose of the project is to improve the overall water quality and quantity conditions of Laurel Creek and its major tributaries, to promote community awareness and participation in stream rehabilitation projects, to encourage aquatic habitat and improve the overall aesthetic appeal of the watercourse. The Laurel Creek Citizen's Committee, consisting of over 50 community volunteers, is responsible for undertaking the labour-intensive stream rehabilitation activities, for performing stream monitoring and assessment work to determine levels of ecological improvements achieved, and to act as stewards of Laurel Creek. With the direct involvement of Trout Unlimited, University of Waterloo and City staff, the Committee has rehabilitated 1.5 km. of stream to date. Rehabilitation efforts have included in-stream debris and sediment removal, new stream bank construction, fish assessment work, and planting trees.

PROBLEMS/SUCSESSES:

This project is the first urban stream rehabilitation project in Canada where restoration work is largely achieved through the efforts of community volunteers. Ecological results achieved in 1990 include increased stream bank stability, reduction of silt, reduction in water temperatures and creation of a healthier aquatic environment for trout and other organisms.

DOCUMENTATION:

Report prepared by Brian Trushinski for the Chief Administrator's Office, April 18, 1991, **Environment First 1990 Review Report.**

INITIATIVE:

4.2 Laurel Creek Watershed Study

CURRENT STATUS:

Conceptual design

ADMINISTERED BY:

Various agencies

BUDGET:

\$720,000

ORIGIN/MOTIVATION:

Urban development has been proposed for the upper portions of the Laurel Creek watershed and there are concerns that this development might lead to downstream flooding or have negative impacts on the surrounding environment.

CONTACT PERSON:

J.D. Willis, Commissioner of Public Works and City Engineer, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8741.

DESCRIPTION:

The Watershed Study will form the basis for an integrated watershed management plan that will provide guidance to local and regional municipal governments in planning future land use development in the Laurel Creek watershed while, at the same time, protecting and enhancing the environment. The study's Mission Statement is to "achieve sustainable development which is aimed at maximizing benefits to the natural and human environments on a watershed basis". The objectives of the proposed Watershed Management Plan are:

1. To ensure that runoff from developing and urbanizing areas is controlled such that it does not unnecessarily increase the frequency and reduce the intensity of flooding.
2. To adopt appropriate land use controls and performance standards for controlling or prohibiting development of flood plains.
3. To prevent erosion and sedimentation of waterways.
4. To prevent the accelerated enrichment of streams and contamination of waterways from runoff.
5. To maintain, restore and enhance a natural vegetative canopy along streams where required to ensure that mid-summer temperatures do not exceed tolerance limits of desirable aquatic organisms.
6. To maintain the stream or waterway free from litter, trash and other debris.
7. To minimize and prevent disturbance of the streambed and, where practical, to restore eroding streambanks to a natural or stable condition.
8. To restore, rehabilitate and enhance water quality and associated resources through the implementation of appropriate Best Management Practices on land.
9. To ensure that environmentally sensitive areas, wetlands and woodlots are protected from the adverse impacts of any proposed development.
10. To maintain essential ecological processes and genetic diversity.
11. To achieve an environmental continuity along Laurel Creek and its tributaries of green, open space linkages extending from the creek's edge into urban and rural areas.
12. To balance the preservation of natural systems with the needs and aspirations of watershed residents.
13. To unify the natural processes and human settlements into a complementary and integrated landscape.
14. To ensure that environmental resource concerns are fully considered and protected in establishing land use patterns along stream corridors and adjacent to areas of ecological significance.
15. To retain and preserve open space and visual amenities in urban and rural areas by establishing and maintaining greenbelts along stream corridors and providing open space linkages to the existing municipal open space system.
16. To ensure that development in the watershed is consistent with the historical and cultural character of the surroundings and fully reflects the need to protect visual amenities.

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17. To ensure that the recreational and fisheries potential within the watershed are developed to the fullest extent possible.
18. To maximize the use of creative and imaginative resources to rehabilitate and transform urban stream corridors, which through neglect may represent a source of urban decay and blight, into attractive community assets consistent with historical or other cultural amenities.

The Watershed Study will include: surface water (hydrology, hydraulic) studies; groundwater studies; water quality studies; fish habitat assessment and rehabilitation; identification of natural resource areas and methods for mitigating development impacts; testing of future land use scenarios to minimize or eliminate impacts on the environment; a public participation program; development of a plan for achieving the Watershed Plan objectives; and recommendations for an implementation strategy and a monitoring program. The study is being coordinated by a Steering Committee made up of representatives from the City and other Laurel Creek watershed municipalities, the Regional Municipality of Waterloo, the Grand River Conservation Authority and the Ontario Ministry of Natural Resources. The anticipated completion date for the study is summer, 1992.

DOCUMENTATION:

Grand River Conservation Authority (1990) **Terms of Reference for the Laurel Creek Watershed Study (Draft).**

INITIATIVE:

4.3 Waste Reduction Program

CURRENT STATUS:

Various stages

ADMINISTERED BY:

Public Works



CONTACT PERSON:

Susan Sauve, Recycling Coordinator, Public Works, City of Waterloo Service Centre, 265 Lexington Court, P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 886-2319.

DESCRIPTION:

Unless otherwise specified, all of the following initiatives have been implemented:

1. Hired a Recycling Coordinator in 1990.
2. With the permission of the Ontario Ministry of Consumer and Commercial Relations, the City asks on its Request for Cremation forms if the applicant is willing to have all casket hardware recycled rather than buried on cemetery lands. Revenues from sale of the scrap are used to plant trees on cemetery lands.
3. Backyard composting program.
4. Curbside collection and composting of grass clippings (pilot project, 1990).
5. Composting of yard waste collected from residential properties at roadside.
6. Recycling of used engine oil from City Fleet and arena refrigeration plants.

7. Apartment recycling of newspaper, glass, cans, telephone books, corrugated cardboard and plastic soft drink bottles.
8. Use of recycled photocopy paper, envelopes, bond paper, paper towels and toilet tissues.
9. City policy to purchase products which contain the maximum level of post-consumer recyclable waste or recyclable content, without affecting intended use and subject to acceptable quality standards and cost premiums.
10. Recycling program for paper, cans and glass at all City facilities.
11. Collection of cardboard from the downtown core.
12. Supported efforts of the Waterloo Citizen's Recycling Committee to establish a centralized, 24 hour recycling depot for the City that accepts corrugated cardboard and boxboard, plastic soft drink containers, newspaper, telephone books, fine and glossy paper, cans, used motor oil and glass.
13. Arranged for Goodwill Industries to precede City collection vehicles during spring rubbish collection and salvage good used and/or repairable large items.
14. Wherever possible, tires on vehicles used by the Public Works Department are recapped.
15. Use of two-sided copiers.
16. Composting in multi-unit dwellings (demonstration project).
17. Goods exchange day.
18. Training workshop for composting educators.

PROBLEMS/SUCCESES:

The 24-hour recycling depot has been well received. Not only are City residents using it, but also residents from adjacent municipalities.

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INITIATIVE:

4.4 Subdivision Cistern Design and Implementation Program

CURRENT STATUS:

Pilot project

ADMINISTERED BY:

Public Works

ORIGIN/MOTIVATION:

Environment First proposal.

CONTACT PERSON:

Gord Lemon, Director of Engineering, Public Works, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8742.

DESCRIPTION:

The program requires the installation of cisterns for up to 20% of the lots in a new subdivision. The purpose of the program is to assess the feasibility of incorporating cisterns into new subdivisions as a municipal water conservation measure that would provide non-potable water for residential lawn watering, vehicle washing, etc. The initiative is expected to reduce urban runoff volume, aid in the control of nearby stream peak flows and enhance groundwater recharge areas.

PROBLEMS/SUCCESES:

The program will be extended to several other subdivisions, including a townhouse development, in 1991.

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INITIATIVE:**4.5 Subdivision Grading, Erosion Control and Planting Plans****ADMINISTERED BY:**

Development and Planning

**CURRENT STATUS:**

Implementation

ORIGIN/MOTIVATION:

This initiative is one of the strategies proposed by Environment First in 1989.

CONTACT PERSON:

Gord Lemon, Director of Engineering, Public Works, City of Waterloo, City Hall, Waterloo City Centre, 100 Regina St. S., P.O. Box 337, Waterloo, Ontario, N2J 4A8, (519) 747-8742.

DESCRIPTION:

The objective of the initiative is to integrate lot grading with tree saving, to control the removal of trees, enhance the planting carried out on both parkland and private property, minimize erosion, reduce storm water runoff and enhance water quality. For all new subdivision developments, the following plans must be submitted to the City prior to approval of a subdivision agreement (service cost report):

1. Trees to be Saved Plan: identifies all existing individual trees, hedgerows or other groupings of trees along with an analysis of which trees are proposed to be removed.
2. Landscaping Plan: for park blocks, greenbelts, trails and open spaces within the Plan of Subdivision.
3. Planting Plan: for all lots within the Plan of Subdivision and all boulevards within and adjacent to the Plan of Subdivision.
4. Subdivision Grading Plan: shows existing and proposed elevations, existing trees to be retained and the drainage scheme for each lot and block within the Plan of Subdivision.

- 5. Storm Water Management and Erosion Control Plan: may include soil stockpiling areas and controls such as infiltration trenches, retention rather than detention ponds, cisterns and elimination of storm sewer connections for all lots and blocks within the Plan of Subdivision.

Prior to the execution of the subdivision agreement, the developer must place a "performance deposit" in the form of a letter of credit with the City in the amount of \$500 for each lot in the subdivision as a guarantee of compliance with the above plans. The performance deposit will be refunded on a street by street basis when "Lot Development Compliance Letters" have been submitted for all lots fronting on a street. A Lot Development Plan must be submitted for every lot prior to approval of a building permit application. The Plan must conform to the plans set out above in items 1-5 and, where appropriate, shall include tree saving measures in accordance with the Development Within Woodlots Policy.

DOCUMENTATION:

Report prepared by John Dewancker and Greg Romanick, Departments of Engineering and Planning, October 23, 1989, **Subdivision Engineering Design Submissions - Update.**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Recreation and Parks Department

CONTACT PERSON:

Gus W. Stahlmann, Director of Recreation and Parks, City of Guelph, 1 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5618.

DEFINITION OF SUD:

Maintain development progress on an ongoing basis.

INITIATIVES:

1. Naturalization Policy (conceptual design)
2. Pesticide Reduction Policy (implementation)
3. Major bicycling/pedestrian pathway system (implementation - 50% complete)
4. River bank protection study (underway)
5. Video to promote the City as a tourist destination (completed)
6. **Guelph Civic Support Program (implementation)**

COMMENTS:

Community involvement in any initiative is essential. Volunteer management and funding programs have also worked well. For example, 28 rinks in the City are managed by volunteers.

DOCUMENTATION:

City of Guelph Recreation and Parks Department (1991) **Naturalization in the City of Guelph Parks: A Proposed Policy.**

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ORGANIZATIONAL UNIT:

1.2 City Engineer's Office

CONTACT PERSON:

R.D. Funnell, City Engineer, City of Guelph, City Hall, 59 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5604.

DEFINITION OF SUD:

Development which maintains existing ecosystems.

INITIATIVES:

- 1. Hanlon Creek Watershed Study
- 2. Water systems study
- 3. **Recycling Program (implementation)**
- 4. Waste Management Master Plan (in cooperation with the County of Wellington) (conceptual design)
- 5. Sewage tertiary treatment plant with sand filtration (implementation)
- 6. **Green Plan (conceptual design)**

COMMENTS:

Since 1985, the City's waste management staff have increased in number from one to seven. There has been strong public support for all environmental initiatives undertaken to date.

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ORGANIZATIONAL UNIT:

1.3 Planning and Development

CONTACT PERSON:

M.P. Venditti, Director of Planning and Development, City of Guelph, City Hall, 59 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5617.

DEFINITION OF SUD:

Development which examines environmental impacts before proceeding.

INITIATIVES:

- 1. **Environmental Constraint Area and Environmentally Sensitive Area Designations in Official Plan (implementation)**
- 2. Statements on energy conservation, pedestrian/bicycle path developments and the provision of a barrier-free environment in the Official Plan (implementation)
- 3. River Systems Management Study (under way)
- 4. Cooperative agreement with adjacent townships to designate a Water Resources Protection Area in their jurisdiction for the protection of Guelph's groundwater supply (implementation)
- 5. Hanlon Creek Study (under way)
- 6. Storm water management ponds required in new residential subdivisions and on-site storm water management system required for new industrial subdivisions (implementation)
- 7. Housing intensification study (under way)

COMMENTS:

Water quality is an important concern in the area because the City draws its supply from groundwater whose recharge areas lie mostly outside the jurisdiction of the City.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Environmental Constraint Area and Environmentally Sensitive Area Designations in Official Plan

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Planning and Development

COUNCIL APPROVAL:

1987

ORIGIN/MOTIVATION:

Recommended for incorporation in the Official Plan by the Ontario Ministry of Natural Resources.

CONTACT PERSON:

M.P. Venditti, Director of Planning and Development, City of Guelph, City Hall, 59 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5617.

DESCRIPTION:

Environmental Constraint areas include:

1. Lands with inherent physical limitations to urban development which, if developed upon, could cause loss of life, property damage, social disruption or damage to the environment.
2. Natural areas containing features and ecological functions that are considered to be significant in terms of either maintaining the natural landscape or providing opportunities for recreation. They generally include: wetlands, valleylands, areas of natural or scientific interest, significant woodlots, or other areas containing rare or high quality plant and animal communities.
3. A set-back from any lands designated as "Environmentally Sensitive Area."

Lands designated as Environmentally Sensitive Areas (ESAs) contain unique ecological or other significant natural features. Designation of the ESAs was based upon a report entitled "Environmental Planning Policy" which studied 21 natural areas in the City. Each of the sites investigated were ranked according to a Natural Environment Index which took into account the biological and social significance of the sites investigated. The biological component of the index takes into account the natural area's sensitivity, diversity and capability to support wildlife. The social component takes into account the economic resource and recreational use potential of the natural areas. The three priority classes resulting from the analysis are as follows:

- Class A:** Natural Environment Index values 200-400. All natural areas that score in this category are classified as Environmentally Sensitive Areas.
- Class B:** Natural Environment Index values 150-200. All natural areas that score in this category have a good potential to be designated as an ESA. However, further investigation is needed before designation. These areas should be protected from development until further investigations can be carried out.
- Class C:** Natural Environment Index values 0-150. All natural areas in this class have no environmental importance and are not constraints to development.

ESAs may be used for: a conservation area, a woodlot or wildlife management area, flood or erosion control facilities, passive outdoor recreations facilities without buildings or structures, excluding golf courses. Development within or adjacent to a significant woodlot area will be required to submit a landscape plan, satisfactory to the City, as a condition of development approval. The landscape plan shall:

1. Contain a detailed inventory of existing trees.
2. Indicate the impact of development on existing trees.
3. Indicate the measures necessary to reduce the impact of development.
4. Where trees are to be removed, indicate the measures necessary to ensure the orderly extraction of trees and preservation of the remaining trees.
5. Be included in the development agreement between the City and the developer.

Where development or redevelopment may impact upon an Environmental Constraint area, the applicant will submit an Environmental Impact Study that shall:

1. Be prepared by a professional qualified in the field of environmental sciences and acceptable to the City and the Ministry of Natural Resources.
2. Delineate the precise boundaries of the area under consideration.
3. Provide an inventory of the flora, fauna, landforms and hydrological characteristics of the area.
4. Identify the character, environmental quality and significance of the ecological functions and plant/animal communities of the area.
5. Identify the resource, recreation or educational potential of the area.
6. Provide any other information required by the City or the Ministry of Natural Resources to evaluate the proposal.
7. Contain a description of, and statement of the rationale for the proposal and alternatives to the proposal.
8. Contain a description of adjacent land use and the existing regulations affecting the proposal and adjacent lands.
9. Contain a detailed description of the environment potentially affected, directly or indirectly, by the proposal, including a statement of the significance of the Environmental Constraint Area.
10. Contain a technical assessment of the effects of the proposal on the environment.

11. Contain a description of the actions necessary to remedy or mitigate the effects on the environment created by the proposal and the alternative methods of protecting the functions and values of the area affected.

The City may appoint an Environmental Advisory Board to assist in the review of Environmental Impact Studies and to advise Council on environmental matters. All reviews to date have been internal reviews.

PROBLEMS/SUCCESES:

Most developers do not contest the designated areas. Responsible developers do not want to acquire a reputation for degrading the environment. Contesting the designation means that the approvals process will take longer and this factor provides an additional incentive for the developer to cooperate. Only one developer to date has been requested to prepare an Environmental Impact Statement.

DOCUMENTATION:

City of Guelph (1990) **Official Plan for the City of Guelph, December 1990 Consolidation.**

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INITIATIVE:

4.2 Waste Management Master Plan (WMMP)

CURRENT STATUS:

Conceptual Design

ORIGIN/MOTIVATION:

The need for additional landfill capacity.

ADMINISTERED BY:

Engineering Department

CONTACT PERSON:

Dan Hoornweg, Waste Management Coordinator, City Engineer's Department, City Hall, 59 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5604.

DESCRIPTION:

The main goal of the WMMP is to develop a comprehensive system for the management of solid waste from the City of Guelph and the County of Wellington. Work on the WMMP began in 1983 and completion of the landfill site selection process is expected by mid-1991. A Public Advisory Committee was formed in 1988 to provide public input to the WMMP.

PROBLEMS/SUCCESES:

The preparation of the plan has encountered several roadblocks since it began in 1983. In particular, Ministry of Environment policies on waste management have been changing continually. Three years ago, the Plan had identified a landfill site that was to be submitted for a provincial environmental assessment, but a recent decision by the Environmental Assessment Board made it clear that submission of a single site would not be satisfactory. The Board rejected a landfill site proposal because no legitimate alternative sites were considered or included in the submission. The Guelph landfill site

search process was then reformulated so that there are now six candidate sites which have been identified and it is expected that these will be narrowed to a single site later this year. Because of these delays, the City's landfill site has exceeded its original capacity and is currently operating under an emergency certificate of approval from the Ministry of Environment.

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INITIATIVE:

4.3 Guelph Civic Support Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Recreation and Parks Department

ORIGIN/MOTIVATION:

The need to find additional funding sources for services offered by Recreation and Parks.

CONTACT PERSON:

Gus W. Stahlmann, Director of Recreation and Parks, City of Guelph, 1 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5618.

DESCRIPTION:

The program seeks private sponsorship for public recreation and parks services. Some of the 27 items available for sponsorship include: trees (\$50-\$100), bicycle paths (\$850 for every 10 metres), park benches (\$150), picnic tables for the disabled (\$150), nature trails (\$10,500), fitness trails (\$22,000), and flowers (\$900 for every 1,000 flowers planted). Special project for which funds have been solicited include:

1. the Adopt-a-Park program for developing or redeveloping a community park (\$20,000-\$100,000)
2. the conservation of Hanlon Creek as a natural parkland (\$100-\$50,000)
3. renovations at a Senior Centre for new meeting areas, a craft room and an auditorium (\$25 and up)

In addition to monetary donations, individuals can also contribute their time as volunteers or donate services, materials or storage space. All donations are recognized by either a certificate of thanks, a wall plaque, or a permanent public plaque.

PROBLEMS/SUCCESES:

The program has been in place almost five years and has raised about \$500,000.

DOCUMENTATION:

City of Guelph Recreation and Parks Department (undated) **Guelph Civic Support Program.**

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INITIATIVE:
4.4 Pesticide Reduction Policy

CURRENT STATUS:
 Implementation

ORIGIN/MOTIVATION:
 Public concern over pesticide use.

ADMINISTERED BY:
 Recreation and Parks Department

CONTACT PERSON:

Gus W. Stahlmann, Director of Recreation and Parks, City of Guelph, 1 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5618.

COUNCIL APPROVAL:

1991

DESCRIPTION:

Some of the City's current pesticide reduction methods include the following:

1. Turf management by aeration, top dressing, sodding/overseeding, fertilization and watering, where possible.
2. Physically removing pests.
3. Field inspection to determine degree of infestation or need for chemical weed control.
4. Spraying some park areas every 2-3 years or as needed.
5. Reduction of area sprayed from 200 ha in 1989 to 150 ha in 1990.
6. Use of mulches and alternative ground covers.
7. Spraying in fall.
8. Ban on the use of 2,4-D.
9. Regular inspection of spraying contractors to ensure observance of safety procedures.

In reviewing its pesticide policy, the City invited 50 members of the general public to serve on a Pesticide Use Committee and eight eventually agreed to serve. The Committee held public meetings on the issue and the City provided clerical support to the Committee. Some of the Committee's recommendations that were adopted by the City include the following:

1. Reduce herbicide usage by 35% in 1991.
2. Monitor and make recommendations as to cost implications and develop an Integrated Pest Management Program.
3. Undertake a 3 year goal to eliminate pesticide use.
4. Use at least 22 cm (9 inches) of topsoil when new parklands are developed or park areas are redeveloped.
5. Develop a formal naturalization policy.
6. Establish a 50-foot spraying buffer around play equipment.

- 7. Produce a brochure to advise the public of the Department's policy to avoid spraying near the homes of chemically-sensitive people and register those who are chemically-sensitive.
- 8. Expand the Department's present policy for involvement of neighbourhoods and community groups to include maintenance programs.

PROBLEMS/SUCCESESSES:

Twelve of the Pesticide Use Committee's 13 recommendations were adopted, some with modifications. Only the recommendation that the City of Guelph move toward establishing itself as a pesticide-free municipality was not adopted.

DOCUMENTATION:

City of Guelph (1991) **Response to Pesticide use Committee Recommendations.**

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INITIATIVE:

4.5 Guelph Green Plan

CURRENT STATUS:

Conceptual design

COORDINATED BY:

Engineering Department

BUDGET:

\$5,000 (for publicity)

ORIGIN/MOTIVATION:

The idea for the Green Plan was proposed by a staff member.

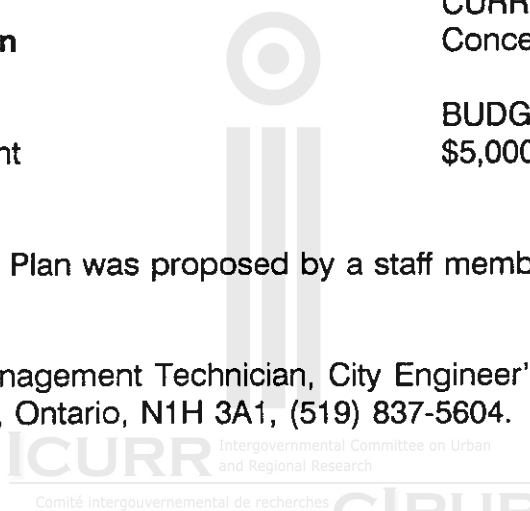
CONTACT PERSON:

Leah Bozic, Waste Management Technician, City Engineer's Department, City Hall, 59 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5604.

DESCRIPTION:

The Green Plan is similar in concept to an Environmental Master Plan for the City with a scope that covers both public and private activities which impact on the environment. The terms of reference for the Green Plan are as follows:

- 1. Identify local and global environmental trends and issues that are likely to affect the City.
- 2. Make recommendations on how to prepare the community to minimize any adverse effects such trends may have.
- 3. Identify the environmental impacts caused by municipal activities in the City and how they can be remedied.
- 4. Recommend ways for the Corporation of the City of Guelph to reduce its overall environmental impact.
- 5. Explore the concept of sustainable development and how it is related to Guelph.
- 6. Undertake an environmental audit of municipal activities for the City.
- 7. Identify methods for incorporating environmental considerations in municipal decision making.



- 8. Provide a forum for a long range vision with respect to the environment within the community.
- 9. Identify and, where possible, coordinate other environmental initiatives within the City.

A draft report of the Green Plan is due for release in July, 1991. Some of the issues being investigated include: naturalization plans, tree planting and preservation, pesticide use, wetlands and river protection, residential densification, building code changes, bike paths, winter use of salt and sand, water use and supply, sewage effluent and sludge disposal, garbage, abandoned landfill sites, storm water management, purchasing policies, improved public transit, improving the downtown core, reducing reliance on the car, growth management and conservation credits. Conservation credits are part of an innovative scheme whose objective would be to encourage better building practices by establishing credits for such items as ceiling fans, better insulation, low water toilets, high efficiency furnaces, and so on. Along with other features of the house, the builder could then promote a building based on the number of conservation credits it contains. Eventually, conservation credits might become standardized and even required at some minimum level in order to obtain a building permit.

PROBLEMS/SUCCESES:

One problem encountered has been finding time for the Green Plan team members from the various departments involved to work on the Plan because of heavy workloads. Originally, the Plan was to be prepared by members of City staff with community input coming from one or more open houses and public comments on a short, preliminary discussion paper. The Ontario Public Interest Research Group (OPIRG) has requested that the Plan be developed using more of a community-based approach. This is the direction in which the Plan is currently going. One component of the new approach is a Green Plan questionnaire which has been distributed to the community by way of the City's recycling newsletter, "Guelph Recycles".

DOCUMENTATION:

Insert in **Guelph Recycles**, Winter 1991.

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INITIATIVE

4.6 Recycling Program

CURRENT STATUS:

Various stages

CONTACT PERSON:

Dan Hoornweg, Waste Management Coordinator, City Engineer's Department, City Hall, 59 Carden Street, Guelph, Ontario, N1H 3A1, (519) 837-5604.

DESCRIPTION:

Unless otherwise noted, all of the following initiatives are in the implementation stage:

1. Blue Box recycling of newspaper, glass, cans, telephone books, and rigid plastic containers
2. Wet/Dry Pilot Project involving 825 households who separate their wet compostable waste from dry recyclable materials and put them out for collection separately
3. Construction of a \$33 million Wet/Dry processing facility (conceptual design)
4. Placement of recycling bins in all City parks for glass and cans
5. Provision of "No Junk Mail" stickers to households requesting them and notification of cooperating flyer delivery organizations in the City that a household wishes to be removed from flyer delivery routes
6. Backyard composting program
7. Operation of a household hazardous waste depot
8. Distribution of a community recycling newsletter, "Guelph Recycles"
9. Recycling programs in all Guelph schools
10. White goods collection service
11. Waste audits for business and industries
12. Fine paper and corrugated cardboard recycling depot
13. Commercial corrugated cardboard collection (maximum of 2 sq.metres per collection per establishment)
14. Roadside collection of leaves for composting
15. Blue cart recycling program (newspaper, glass, cans, plastic containers) for businesses and industries

PROBLEMS/SUCCESSSES:

One of the reasons that Guelph has become a leader in the recycling field is that the program has the support of Council, City staff and the general community. The City is also the right size for testing new initiatives and is affluent enough to be able to absorb the costs of making minor mistakes. A major source of funding for Guelph's recycling initiatives has been tipping fee revenue from its landfill. One of the emerging issues for municipal recycling programs in Ontario is that the provincial government is setting high goals for waste reduction and environmental protection while municipalities tend to have a more pragmatic attitude towards what can be achieved.

DOCUMENTATION:

Engineering Department (1991) **City of Guelph Wet/Dry Pilot Project: Summary of Preliminary Findings.**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Department of Purchasing and Supply

CONTACT PERSON:

J. Darcy Duncan, Commissioner, Department of Purchasing and Supply, City of Toronto and Municipality of Metropolitan Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7311.

DEFINITION OF SUD:

Sustainable development strategies are those that allow us to progress yet still have a positive impact on the environment.

INITIATIVES:

1. **Statements of principle on environmentally sound packaging (implementation)**
2. Preparation of a directory of suppliers of environmentally sound products and services (in cooperation with other members of ACCESS) (completed)
3. Purchase of file folders, fine paper, sanitary paper products, stationery items, computer paper and envelopes made from recycled fibre of which 50%-100% is de-inked, post-consumer waste (implemented)
4. Laser printer toner cartridge recycling (implementation)
5. Double-sided printing on tender and quotation documents (implementation)
6. Investigation of alternative fuels; conversion of one automobile to natural gas and purchase of an electric-powered van (implementation)
7. Establishment of an internal paper reduction sub-committee (implementation)
8. Member and currently chair of GIPPER (Governments Incorporating Procurement Policies to Eliminate Refuse), consisting of representatives from federal and provincial ministries, municipalities in the Greater Toronto Area, and Standards Writing Organizations (CSA, CGSB). The organization investigates ways in which waste can be diverted from the waste stream through Government purchasing. (implementation)
9. Purchase of re-refined oils (implementation)
10. Purchase of cruelty-free products (i.e. no animals are used in testing the products) (conceptual design)
11. Purchase of biodegradable/phosphate free/water soluble cleaning products (conceptual design)
12. Federal Environmental Choice Guidelines, where they exist, are referenced in purchasing specifications (implementation)
13. Quotation requests for packaged items include the following clause: "Where possible, the Supplier shall use packaging manufactured from recycled material." (implementation)

14. Shrink-wrapping of documents produced by the Department's printing machine has been discontinued and replaced by the use of three sizes of standardized returnable cartons (implementation)
15. Adoption of the 1994 federal emission control levels for gas and diesel engines on City vehicles as of 1991 (implementation)
16. Emission analyzers at each of the City's major garages improve the quality of tune-ups. Read-outs from the tune-ups on CO₂, etc. make vehicle operators more aware of vehicle's environmental performance (implementation)
17. Newsletter, entitled "Purchasing for a Healthy Environment", for City Hall employees and politicians advising them of current purchasing issues and practices that reduce impacts on the environment (implementation)
18. Replacement of aluminum road and park signs with signs manufactured from recycled plastic (conceptual design)
19. Use of generic folders made from recycled paper for City documents (implementation)

PROBLEMS/SUCSESSES:

Testing of environmentally friendly products is important before full scale adoption. For example, picnic tables manufactured from recycled "plastic wood" were tested and found to be unsuitable for use with Hibachi barbecues. The table-top barbecues melted the surface of the picnic table.

COMMENTS:

The Department has recognized budget limitations in the development of its Environmentally Friendly Purchasing Policies and some initiatives have not been pursued for financial reasons. The philosophy of staff in the Department is to be conscious of environmentally friendly alternatives for any function.

ORGANIZATIONAL UNIT:

1.2 Planning and Development Department

CONTACT PERSON:

Robert E. Millward, Commissioner, Planning and Development Department, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7182.

DEFINITION OF SUD:

Development so that you do not prejudice the options of future generations.

INITIATIVES:

1. SUD component in proposed new Central Area Plan (conceptual design)
2. Establishment of a position for an Environmental Planner (implementation)
3. Don River Task Force and study (implementation)

4. Staffing support for and cooperation with the Royal Commission on the Waterfront (implementation)
5. Heads Sub-Committee on the Environment (implementation)
6. Interdepartmental Committee on the Environment (implementation)
7. Soil reclamation and waste management requirements for new development applications (implementation)
8. Establishment of a position for a cycling planner (implementation)

COMMENTS:

The City does not yet have the legislative authority to do many of the things that it is being asked to do. Industry is being cooperative in complying with new requirements that will eventually become codified.

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ORGANIZATIONAL UNIT:

1.3 Department of Public Works and the Environment

CONTACT PERSON:

Nicholas Vardin, City Engineer and Commissioner, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7701.

DEFINITION OF SUD:

Activities and operations that do not jeopardize future generations. We can no longer allow our activities to be governed by economic considerations only. We must factor all costs into decision making and consider the long term costs to resources and the environment.

INITIATIVES:

1. **Establishment of an Energy Efficiency Office (implementation)**
2. District heating and cooling study (implementation)
3. Establishment of urban clearways restricting curb lanes to use by public transit vehicles, taxis, bicycles and emergency vehicles between the hours of 7AM to 7PM (implementation)
4. **Transportation management plans required of new developments (implementation)**
5. Traffic calming measures (conceptual design)
6. **Waste Reduction Program (various stages)**
7. Water Conservation Program (implementation)
8. Annual water quality improvement programs (implementation)
9. Sewer system master plan (conceptual design)
10. Participation in Remedial Action Plans for water quality improvements (implementation)
11. Ban on the disposal of untested soil at clean fill disposal site (implementation)
12. Creation of an Environmental Charter (conceptual design)

- 13. Mixing of crushed, rejected glass from the Blue Box program with excavated material for use as backfill (conceptual design)

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ORGANIZATIONAL UNIT:

1.4 Department of Public Health

CONTACT PERSON:

Dr. Perry Kendall, Medical Officer of Health, City of Toronto, City Hall, Toronto, M5H 2N2, (416) 392-7405.

DEFINITION OF SUD:

Managing our human and physical capital so as not to harm the lives of future generations and hopefully to enhance them as well.

INITIATIVES:

- 1. Establishment of the Environmental Protection Office (implemented)
- 2. Establishment of the Healthy City Office (implemented)
- 3. CFC Bylaw (implementation)

COMMENTS:

All of the initiatives have been successful to date. These types of initiatives must have inter-sectoral cooperation if they are to work and strong public support is essential.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

2.1 Material Management Branch

Intergovernmental Committee on Urban and Regional Research
Comité intergouvernemental de recherches urbaines et régionales

DATE ESTABLISHED:

1991

REPORTS TO:

Director, Material Management and Sanitation Section

STAFF:

8

ORIGIN/MOTIVATION:

The need to establish a permanent administrative structure to manage the Department of Public Works and the Environment's increased waste reduction and recycling activities.

CONTACT PERSON:

Don Young, Manager, Material Management, Department of Public Works and the Environment, City of Toronto, 505 Richmond St. West, Toronto, Ontario, (416) 392-7721.

DESCRIPTION:

The Branch consists of 8 new positions, including a manager, a recycling coordinator, waste reduction coordinator, a promotion coordinator, a research analyst and technical support staff. The responsibilities of the Branch include the following: the recovery of recyclable materials, composting systems and programmes, material management in existing and new buildings in the City, reduction and reuse of packaging, promotion of material reduction, reuse and recycling, development of markets for materials, increased linkages to business and industry, research and development of new material management technologies, negotiating the development of privately operated material reduction and recycling facilities, development and maintenance of computer information systems and programmes, research, evaluation, development and implementation of hazardous material programmes including the safe disposal of such material, and the compilation and analysis of all data related to the section's activities.

DOCUMENTATION:

City of Toronto Executive Report No. 26, Item 68, December 3, 1990, **Reorganization - Sanitation Section - Department of Public Works and the Environment- Phase2, Part1**

ORGANIZATIONAL UNIT:

2.2 Healthy City Office

DATE ESTABLISHED:

1989

BUDGET:

\$700,000

STAFF:

8

ORIGIN/MOTIVATION:

A recommendation in the Healthy Toronto 2000 report to Council.

REPORTS TO:

Inter-departmental Coordinating Committee on the Environment

CONTACT PERSON:

Diana Baxter, Manager, Healthy City Project, Healthy City Office, City of Toronto, Suite 219, 40 Dundas St. West, Toronto, Ontario, M5G 2C2, (416) 392-0099.

DESCRIPTION:

The role of the Healthy City Office has been defined as follows:

1. Develop and undertake an internal consultation process.
2. Develop and undertake a community consultation process.
3. Prepare reports in support of the various activity areas identified in Healthy Toronto 2000
4. Draft policy proposals, develop a long-term communications strategy, develop an information strategy, and prepare a long-term work plan.
5. Prepare a newsletter, articles and displays/exhibits.

6. Prepare a State-of-the-City report.
7. Liase with other departments in developing and implementing the Healthy City Initiative.

INITIATIVES:

Some of the activities of the Office to date include the following:

1. Preparation of a State-of-the-City report (expected completion, December 1991).
2. Development of Healthy City indicators.
3. Development of a process for awarding Healthy City Awards to community projects.
4. Operation of a community outreach program and a Healthy City contest.
5. Survey of City employee trips-to-work.
6. Joint project with the Safe City initiative to produce a Safe City kit.
7. Support for bike-to-work week.

DOCUMENTATION:

City of Toronto Board of Health, Report No. 11, Clause 9, September 10, 1990, **Status Report -Recommendations contained in Healthy Toronto 2000 Report.**

City of Toronto Executive Committee, Report No. 18, Clause 67, May 18, 1989, **City of Toronto Healthy City Initiative.**

ORGANIZATIONAL UNIT:

2.3 Environmental Protection Office

DATE ESTABLISHED:

1987

REPORTS TO:

Medical Officer of Health

STAFF:

14

ORIGIN/MOTIVATION:

The Environmental Protection Office (EPO) was established because of the increased environmental protection workload being experienced by City staff in general and by Department of Public Health staff in particular. The increased workload was the result of a high level of public concern about the environmental determinants of human health. In 1980, 16% of the items considered by the Board of Health were environmental and by 1985 this had risen to 26%.

CONTACT PERSON:

Dr. Robert J.P. Gale, Manager, Environmental Protection Office, Department of Public Health, City Hall, 6th Floor, East Tower, Toronto, Ontario, M5H 2N2, (416) 392-2716, fax number (416) 392-0047.

DESCRIPTION:

The role of the Environmental Protection Office encompasses the following activities: health promotion through education, community development, advocacy, policy and legislative development; primary and secondary research into environmental factors affecting the health of residents of Toronto; and investigation of environmental and health issues. The staff of the EPO consists of a program manager, a research supervisor, an information coordinator, six researchers, an industrial hygiene consultant, a community worker, and three support staff.

INITIATIVES:

Recent reports prepared by the EPO include the following:

1. Controlling CFC's in the City of Toronto.
2. Traffic Reduction Programs.
3. Toronto's Drinking Water.
4. An Environmental and Economic Comparison of Diapering Options.
5. A State of the Environment Report for Toronto.
6. Environmental Health Effects of Waste Incineration in the City of Toronto.
7. Lead Levels in Drinking Water.
8. Food Irradiation.
9. Identification and Assessment of PCB Clean-up Technologies.

Reports currently in the planning or draft stage include the following:

1. Air Toxics.
2. A Hazardous Waste Profile for the City of Toronto.
3. A Hazardous Waste Minimization Program for the Private Sector.
4. A Land Use Inventory.
5. Application of Environmental Conditions on Redevelopments.
6. Soil Remediation Technology.
7. Risk Assessment Manual.

The EPO has also reviewed over 100 site development applications submitted to the Planning and Development Department.

PROBLEMS/SUCCESSSES:

A recent external evaluation of the EPO concluded that the EPO has been very successful from an advocacy point of view, but has had difficulty in keeping up with the increased demands being placed on it to respond to all issues in the environmental area. Being asked to do more than it can handle has led to strain and loss of staff in the Office. Another problem, created by the intersectoral nature of most environmental issues, is that the EPO has sometimes been perceived as encroaching on other departments' territories. The evaluation report includes recommendations for relieving these problems. Although many of the reports prepared by the EPO to date have been for information only, several have led to further action by the City or other agencies. The report on "Lead Levels in Drinking Water" raised public awareness of the issue and prompted Winnipeg to undertake a similar study. The report on "Controlling CFC's in the City of Toronto" resulted in the drafting of a CFC Bylaw for the City, a change in the City's purchasing

policy, increased attention being given to the issue by the federal and provincial governments, and investigation of the issue by other cities in Canada. The report on "An Environmental and Economic Comparison of Diapering Options" resulted in a three month trial of cloth diapers at a daycare center in City Hall. The report on "Traffic Reduction Programs" led to the establishment of a Task Force to study measures identified in the report. The report on "Environmental Health Effects of Waste Incineration in the City of Toronto" recommended that the City consider closing its incinerator. Public pressure eventually resulted in the closure of the incinerator.

DOCUMENTATION:

Memorandum from the Medical Officer of Health to the Board of Health, February 10, 1987, **Establishment of an Environmental Protection Office, Department of Public Health.**
Memorandum from the Medical Officer of Health to Executive Committee, December 24, 1990, **Evaluation of the Environmental Protection Office.**

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ORGANIZATIONAL UNIT:
2.4 Energy Efficiency Office

DATE ESTABLISHED:
1990 (began operations in 1991)

ORIGIN/MOTIVATION:

A recommendation of The Changing Atmosphere: A Call To Action.

REPORTS TO:

Commissioner of Public Works and the Environment

STAFF:

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CONTACT PERSON:

Heinrich C. Feistner, Energy Efficiency Office, City of Toronto, 100 Queen Street West, City Hall, 23th Floor, East Tower, Toronto, Ontario, M5H 2N2, (416) 392-1110.

FUNCTION/GOALS:

Short term objectives: Gather and evaluate all relevant information on existing and past energy conservation and efficiency improvement programs and technologies by various agencies, institutions and groups. Develop a comprehensive strategy to make City-owned as well as commercial and institutional buildings as energy efficient as possible. Initial elements of the strategy will include: 1. Energy supply curve study; 2. Energy audits; 3. Lighting conservation program; 4. Energy efficiency training program for building operators in all commercial and institutional sectors; 5. Retrofit demonstrations; 6. Evaluation of existing energy generation facilities; 7. Promotion and community outreach. Long term objectives: Develop regulatory and market (pricing) options in partnership with Toronto Hydro and others, assessing the feasibility of their implementation in cooperation with the higher levels of government and utility companies, initiating the implementation of feasible options, and monitoring their effectiveness. Options to be investigated include: 1. Performance standards; 2. Rate structure changes; 3. New technology.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

3.1 Special Advisory Committee on the Environment 1988

REPORTS TO:

BUDGET:

City Council

\$56,000

ORIGIN/MOTIVATION:

In June, 1988, an international conference was held in Toronto on "The Changing Atmosphere: Implications for Global Security". The conference addressed the problems of local, regional, and global atmospheric pollution, including acid rain, stratospheric ozone depletion and global warming. The conference participants produced a set of recommendations urging governments to:

1. Reduce carbon dioxide (CO₂) emissions by approximately 20% of 1988 levels by the year 2005.
2. Reduce deforestation and increase reforestation.
3. Establish a World Atmospheric Fund to help finance solutions to the problems of atmospheric pollution.

A City of Toronto Councillor attended the conference and subsequently urged Toronto City Council to take local action on the issue. In September, 1988, the City approved the establishment of a Special Advisory Committee on the Environment whose function would be to suggest ways the Conference's recommendations could be implemented at the municipal level.

CONTACT PERSON:

Dr. Danny Harvey, Co-Chair, City of Toronto Special Advisory Committee on the Environment, Department of Geography, University of Toronto, 100 St. George St., Toronto, Ontario, M5S 1A1, (416) 978-1588.

MEMBERSHIP:

12 members with representatives from the energy industry, the federal government, the provincial government, universities, environmental interest groups and consulting companies.

DESCRIPTION:

The Committee's primary mandate is to advise City Council on ways to reduce Toronto's contribution to emissions of greenhouse gases and air pollution, with particular emphasis on:

1. the efficient use of fuels;
2. the reduction of "greenhouse gases";
3. air conditioning and heating of buildings;
4. pollution from automobiles;
5. any other matters which would lead to the improvement of air quality.

INITIATIVES:

The Committee has produced the following two reports:

1. The Changing Atmosphere: A Call to Action
2. The Changing Atmosphere: Strategies for Reducing CO2 Emissions

DOCUMENTATION:

City of Toronto Special Advisory Committee on the Environment (1991) **The Changing Atmosphere: Strategies for Reducing CO2 Emissions - Policy Overview.**

City of Toronto Special Advisory Committee on the Environment (1989) **The Changing Atmosphere: A Call to Action.**

ORGANIZATIONAL UNIT:

3.2 Don Valley Task Force

DATE ESTABLISHED:

1990

BUDGET:

\$100,000 from the City of Toronto plus in-kind services from the Toronto Harbour Commission.

REPORTS TO:

City Services Committee

STAFF:

2 full-time staff from Planning

ORIGIN/MOTIVATION:

A grassroots movement to clean up the Don River.

CONTACT PERSON:

David McClusky, Environmental Planner, Cityplan '91, Planning and Development Department, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-0068.

DESCRIPTION:

The Task Force to Bring Back the Don was initiated in 1989. It began as an informal organization of citizens and interest groups that represented various private and public constituencies in the Don River Valley. It was formalized in 1990 by Toronto City Council. Its mandate is to undertake initiatives that will contribute to the ultimate restoration of the entire Don River watershed by focusing on rehabilitation efforts within the jurisdiction of the City of Toronto. The Task Force promotes clean water, restoration of open space, improvement of public access to the valley, education and community involvement in its decision making process and cooperation with Civic Departments, other levels of government and government special purpose bodies. The Task Force's goal is to see

practical results in the Lower Don by 2001.

INITIATIVES:

1. Sponsorship of river clean-up days.
2. Establishment of linkages with upstream citizens' groups.
3. Preparation of an integrated management plan (under way).

PROBLEMS/SUCSESSES:

One of the most significant accomplishments of the Task Force to date has been the mobilization of community resources and the creation of partnerships with business for river clean-up days and naturalization projects. For example, one company held a picnic/tree planting day in the valley that was attended by 1,000 employees. The City contributed the saplings and the company looked after all other expenses. An international communications firm has provided the Task Force with a travelling display and a public information brochure. Corporate sponsorship is expected to continue.

DOCUMENTATION:

Report from the Interim Task Force on the Lower Don River Clean-up to City Services Committee, April 6, 1990, **1990 Work Program for the Lower Don River Task Force.**

Jim Ward Associates and Ken Wyman and Associates (1991) **Community Outreach/Consultation and Proposed Long-Term Plan for the Bring Back the Don Task Force.**

Task Force to Bring Back the Don (1991) **Lower Don River Study (Draft).**

ORGANIZATIONAL UNIT:

3.3 Technical Workgroup on Traffic and Vehicle Emissions

DATE ESTABLISHED:

1990

REPORTS TO:

Committee of Heads Subcommittee on the Environment

ORIGIN/MOTIVATION:

A recommendation by the Medical Officer of Health in response to the Board of Health's request to investigate traffic calming and emission reduction measures in other jurisdictions.

CONTACT PERSON:

Diana Baxter, Manager, Healthy City Project, Healthy City Office, City of Toronto, Suite 219, 40 Dundas St. West, Toronto, Ontario, M5G 2C2, (416) 392-0099.

MEMBERSHIP:

Representatives from 9 departments, the City Cycling Committee, the Special Committee on the Environment, the Board of Health Sub-Committee on the Environment, the Toronto Transit Commission, GO Transit, the Board of Trade of Metro Toronto, the Toronto Association of Business Improvement Areas, the Parking Authority of Toronto, and 6 community activist groups.

DESCRIPTION:

The terms of reference for the Committee are as follows:

1. Assess the feasibility of traffic calming and vehicle emission reduction measures.
2. Prepare a long term strategy to reduce traffic and vehicle emissions in the City.
3. Develop programs to receive public community and business community input.
4. Develop an education program aimed at providing information on lifestyle changes necessary for an all-out attack on traffic and emission reductions.
5. Develop a strategy to improve alternatives to the private automobile, such as transit, bicycle and walk modes.
6. Investigate and recommend ways to expedite transit priority schemes.
7. Investigate the energy efficiency of existing automobiles with a view to encouraging the appropriate authorities to hasten the integration of more fuel efficient vehicles into the market place.

A report from the workgroup is expected for Fall, 1991.

PROBLEMS/SUCCESSSES:

The multi-sectoral approach of the workgroup has developed a broad base of support.

DOCUMENTATION:

Report from the Medical Officer of Health to the Board of Health, September 29, 1989, **Traffic Reduction Programs.**

Report to City Services Committee and the Board of Health, April 5, 1990, **Technical Workgroup on Traffic Calming and Vehicle Emissions.**

ORGANIZATIONAL UNIT:

3.4 Interdepartmental Coordinating Committee on the Environment

DATE ESTABLISHED:

1990

REPORTS TO:

Committee of Heads Subcommittee on Environment

MEMBERSHIP:

Managers and directors from City departments plus representatives from Ontario Hydro and the Special Advisory Committee on the Environment.

CONTACT PERSON:

Nicholas Vardin, City Engineer and Commissioner, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7701.

GOALS/OBJECTIVES:

1. Monitor current environmental issues City-wide.
2. Coordinate multi-departmental responses to environmental issues.
3. Recommend corporate environmental strategies.
4. Develop an overall environmental strategy for the City.

INITIATIVES:

1. Anti-idling bylaw.
- =====
- =====

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4. SELECTED INITIATIVES

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INITIATIVE:**CURRENT STATUS:**

4.1 Statements of principle on environmentally sound packaging Implementation

ADMINISTERED BY:

Department of Purchasing and Supply

ORIGIN/MOTIVATION:

In June, 1989, the City and Metro Toronto Department of Purchasing and Supply hosted a symposium on "The Purchase of Reusable and Recyclable and Reclaimable Materials". Purchasing officials from Halifax, Fredericton, Montreal, Ottawa, Hamilton, Regina, Winnipeg, Calgary, Edmonton, Vancouver and Victoria attended. Together with the Ontario Ministry of Government Services and the Toronto Harbour Commissioners, they developed a Statement of Principle that was subsequently adapted for the City of Toronto. The City of Toronto is a member of GIPPER (Governments Incorporating Procurement Policies to Eliminate Refuse) and has adopted its statement of principle as well. GIPPER was established in 1989 at the request of Metropolitan Toronto for the purpose of reducing the quantity of waste produced by government bodies, providing markets necessary to promote and sustain waste reduction, reuse, recycling and recovery of materials initiatives, and developing a process to facilitate cooperative or joint purchasing among the different levels of government so as to influence and promote markets.

CONTACT PERSON:

J. Darcy Duncan, Commissioner, Department of Purchasing and Supply, City of Toronto and Municipality of Metropolitan Toronto, City Hall, Toronto, M5H 2N2, (416) 392-7311.

**COUNCIL APPROVAL:
1989**

DESCRIPTION:

The City of Toronto's statement of principle is as follows: "That in order to increase the development and awareness of Environmentally Sound Products all departments, in conjunction with Purchasing and Supply staff, review their contracts and tender specifications for goods and services to ensure that, wherever possible and economical, specifications are amended to provide for expanded use of products and services that contain the maximum level of post-consumer reusable or recyclable waste and/or recyclable content, without significantly affecting the intended use of the product or services, and that it is recognized that cost analysis is required in order to ensure that the products are made available at competitive prices."

The GIPPER statement of principle is as follows: "In order to contribute to waste reduction and to increase the development and awareness of Environmentally Sound Purchasing, acquisitions of goods and services will ensure that wherever possible, specifications are amended to provide for expanded use of durable products, reusable products and products (including those used in services) that contain the maximum level of post-consumer waste and/or recyclable content, without significantly affecting the intended use of the products or service. It is recognized that cost analysis is required in order to ensure that the products are made available at competitive prices."

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INITIATIVE:

4.2 The Changing Atmosphere: A Call to Action

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

The report contributes to fulfilment of the Special Advisory Committee on the Environment's mandate.

CONTACT PERSON:

Dr. Danny Harvey, Co-Chair, City of Toronto Special Advisory Committee on the Environment, Department of Geography, University of Toronto, 100 St. George St., Toronto, Ontario, M5S 1A1, (416) 978-1588.

DESCRIPTION:

The Committee's policy recommendations focus on ways to reduce air pollution caused by operation of motor vehicles and energy consumption by buildings.

Overall Objective

1. The City of Toronto should take responsibility for its own CO2 emissions by committing itself to achieving an initial 20% net reduction of CO2 emissions by the year 2005.

Reduction of air pollutant emissions

2. Implement a remote tailpipe sensing demonstration project to identify the worst polluting vehicles on the road and spur the Province towards establishing a province-wide remote tailpipe network and/or mandatory vehicle emissions inspection program.
3. Reduce significantly the energy intensity of the City's transportation by:
 - a. updating the 1970 Metropolitan Toronto Area Transportation Energy Study to provide a firm basis for future planning and sponsoring in spring 1990 an international workshop on energy in urban transportation to influence Cityplan '91;
 - b. enhancing public transit and more aggressively managing traffic demand and vehicular occupancy during rush hours;
 - c. implementing a demonstration project to promote bicycling and walking;
 - d. exploring the potential future role of electric and natural gas vehicles in urban transportation;
4. Develop a comprehensive energy conservation strategy for the City that would include:
 - a. energy audits for all City-owned buildings;
 - b. a program to convert 80% of the City's commercial and institutional space by 2000 to the highest efficiency lighting;
 - c. dissemination of information on energy efficiency to building operators, architects, and developers;
 - d. voluntary audits for new buildings during their design stages;
 - e. upgrading the existing district heating system to use energy-efficient cogeneration technology.

Carbon emissions recycling

5. Undertake financing of reforestation projects in Central America and/or southern Ontario to offset 20% of the City's carbon emissions for 40 years, at a cost over 10 years of about \$2.4 million per year if undertaken in Central America, and about \$10 million per year if undertaken in Ontario. These costs could be reduced significantly through in-kind contributions.

Action by other jurisdictions

6. Urge the federal government to strengthen the automobile Corporate Average Fuel Economy (CAFE) standards from the current 8.6 litres/100 km. to 4.7 litres/100 km.
7. Urge the federal government to adopt California's automobile emissions standards for nitrogen oxides and hydrocarbons by 1993.
8. Urge the federal government to prohibit CFC substitutes that have a strong greenhouse effect.
9. Urge the province to pursue a vigorous motor vehicle emissions monitoring and enforcement effort.
10. Urge both governments to revise their respective building codes to require performance standards for more energy efficient buildings.

- 11. Urge both governments to adopt appliance and commercial lighting energy efficiency standards at least equivalent to present American federal standards.
- 12. Urge both governments to monitor ambient methane in order to identify potential leakage associated with the use of natural gas.

Financing and Administration

- 13. Establish the City of Toronto Atmospheric Fund, to which City as well as private corporations and individuals could contribute.
- 14. Establish an energy conservation office headed by an energy coordinator.

PROBLEMS/SUCSESSES:

In 1990, the City of Toronto received a United Nations award in recognition of the City's leadership role in banning CFC's and its CO2 initiatives. Council adopted the report in 1990 and many of the recommendations in the report have already been implemented, including the establishment of an Energy Efficiency Office in January, 1991. Site visits have been made to identify possible reforestation project areas in Central America and mechanisms to establish the City of Toronto Atmospheric Fund are close to being finalized.

DOCUMENTATION:

City of Toronto Special Advisory Committee on the Environment (1989) **The Changing Atmosphere: A Call to Action.**

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INITIATIVE:

4.3 The Changing Atmosphere: Strategies for Reducing CO2 Emissions

CURRENT STATUS:

Completed and in the process of being submitted to Council.

ORIGIN/MOTIVATION:

The report contributes to fulfilment of the Special Advisory Committee on the Environment's mandate.

CONTACT PERSON:

Dr. Danny Harvey, Co-Chair, City of Toronto Special Advisory Committee on the Environment, Department of Geography, University of Toronto, 100 St. George St., Toronto, Ontario, M5S 1A1, (416) 978-1588.

DESCRIPTION:

This report outlines a set of strategies which indicate how Toronto can reduce its CO2 emissions by 20% while accommodating up to a 20% growth in the number of people living and working in the City. The reports's recommendations are as follows:

TORONTO

1. That Toronto Hydro be requested to adopt policies to reduce CO2 emissions associated with electricity consumption in the City by 20%, relative to the 1988 level, by 2005 through improved end use efficiency and switching to other energy forms when this results in a net CO2 emission reduction, excluding transportation electricity use.
2. That Consumers' Gas be requested to adopt policies to reduce CO2 emissions associated with natural gas consumption in the City by 20% by 2005 through improved end use efficiency, excluding increased demand resulting from switching into natural gas from current electricity or oil consumers and excluding natural gas used for electricity generation or transportation.
3. That net CO2 emission reductions in the transportation sector of 20% be achieved by 2005 with account taken of CO2 emissions associated with oil, electricity, and natural gas used to power public transit vehicles, cars and trucks.
4. That stationary oil use be monitored and, if market forces alone do not induce sufficient decreases in stationary oil use, that appropriate measures be taken to induce a net CO2 emission reduction in this sector of 20% by 2005.
5. Transform Toronto Hydro into an electricity service company.
6. Discourage electric resistance space heating and bulk metering of multi-unit buildings.
7. Intervene at the Ontario Energy Board Hearings in order to seek OEB approval for aggressive promotion of energy efficiency and conservation by Consumers' Gas.
8. Strengthen the mandate of the Energy Efficiency Office to include the development of a procedure and a set of assumptions for life-cycle cost analysis that can be applied to new buildings and renovations.
9. Enact a Municipal Energy Efficiency Bylaw that establishes energy performance standards and provides market incentives to go beyond the standards.
10. Expand and improve the City's district heating system.
11. Implement measures to reduce dependence on the automobile.
12. Seek establishment of a Greater Toronto Transportation Authority with overall planning authority to integrate different modes of public transit and development, as well as financing a significant expansion of the present system.
13. Expand the City's urban forest.
14. Protect existing trees.
15. Increase financial support for urban forestry on the order of \$4 million to \$5 million per year.
16. Support reforestation in Southern Ontario and Central America as a means of creating a sink for CO2.
17. Encourage the establishment in Toronto of factories to manufacture state-of-the-art energy efficient equipment.
18. Ensure skills development and job retraining in order to create a workforce qualified to implement the above recommendations.
19. Develop a comprehensive program of public education and outreach.

- 20. Establish the City of Toronto Atmospheric Fund to support agroforestry and reforestation outside the City and to support innovative energy saving technologies, demonstration projects and/or programs.
- 21. Encourage the provincial government to set a target of reducing provincial CO2 emissions by 20% from 1988 levels by 2005.

PROBLEMS/SUCCESES:

The Committee was unable to quantify the relative contributions and upfront costs of the different measures it recommended in its report as the necessary data do not yet exist. Nevertheless, it felt that some combination of its recommendations would achieve the 20% CO2 reduction goal and that all of the recommendations would be needed to some extent for a cost-effective emission reduction.

DOCUMENTATION:

City of Toronto Special Advisory Committee on the Environment (1991) **The Changing Atmosphere: Strategies for Reducing Co2 Emissions, Volumes I and II.**

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INITIATIVE:
4.4 CFC Bylaw

CURRENT STATUS:
Implementation

ADMINISTERED BY:
Department of Public Health

ORIGIN/MOTIVATION:
Request from a City Councillor to "ban the manufacture, sale, distribution, and use of items which are disposable and discharge CFC's and Halons into the atmosphere in the City of Toronto".



CONTACT PERSON:
Victor Y. Nishi, Research Consultant, Environmental Protection Office, City of Toronto, 12 Shuter St., Toronto, Ontario, M5B 1A1, (416) 392-6788.

COUNCIL APPROVAL:
April 1989, Revised June 1989, Revised October 1990.

DESCRIPTION:

The first revision to this bylaw made slight modifications to the timing of its implementation and enforcement. The second revision in 1990 was more extensive and was made because of the introduction of provincial and federal regulations on CFC's between 1989 and 1990. The final version of the bylaw restricts itself to the regulation of the servicing and disposal of CFC's. The contents of the original 1989 bylaw are presented below. The 1990 version of the bylaw is shown in bold lettering.

1. No person in the City shall manufacture any product or equipment which contains and emits or could emit CFC's or halons or both into the atmosphere, unless
 - a. there is, at the time of manufacture, no alternative to the use of the CFC's or halons, and there exists in connection with such manufacture, a properly operating recovery system for the CFC's or halons; and
 - b. an audit for CFC's and halons has been conducted.
2. No person in the City shall manufacture products or equipment containing CFC's or halons that can be drained or recovered from the product or equipment unless the product or equipment is equipped or designed so as to permit the proper installation or use for its intended purpose without leakage of the CFC's or halons.
3. Every person in the City who disposes of any product or equipment that contains chlorofluorocarbons or halons in a form which can be drained or recovered from the product or equipment shall only dispose of such product or equipment by:
 - a. delivering such product or equipment to a recovery site established by the City or authorized by the Council of the City;
 - b. delivering such items for municipal garbage disposal in accordance with garbage recovery systems established by the City; or
 - c. ensuring that prior to disposal, the CFC's and halons are drained and recovered from the product or equipment and transported intact to a recovery site established or authorized by the City.
4. No person in the City shall service or repair or permit the servicing or repair of any air conditioner, air conditioning equipment or system including any vehicular air conditioning system, chiller refrigerator, freezer, refrigerating or cooling equipment or system, unless such person ensures that any coolant containing CFC's is not vented to the atmosphere during the servicing or repair service.
5. No person in the City shall sell or install any rigid foam material for building insulation that contains CFC's or with respect to which CFC's are used as a blowing agent during the manufacturing process.
6. No person in the City shall manufacture or sell any aerosol container that uses CFC's as a propellant, except aerosol containers of products used for medical purposes.
7. No person in the City shall test or service any fire extinguisher or fire extinguisher system if such test or servicing causes or could cause the release of halons into the atmosphere.

8. No person in the City shall manufacture, distribute or sell any plastic foam material or any other product or material containing CFC's or for which CFC's have been used as a blowing agent during the manufacturing process, for the purpose of packaging, wrapping or containing edible or non-edible products.
9. Every employer in the City where the business activity includes the handling and use of CFC's or halons in furtherance of the business activity shall:
 - a. within seven months after the passing of this bylaw, conduct and submit an audit to the Medical Officer of Health identifying the quantity, types and use of CFC's and halons in the business activity;
 - b. within 18 months after the passing of this bylaw, conduct and submit an audit to the Medical Officer of Health which sets out a material balance of the CFC's and halons used in the business activity, and identifies the methods used for recovery and reclamation of the CFC's and halons; and
 - c. if such business activity is commenced after the 18 month period referred to above, register notice and submit an audit to the Medical Officer of Health at the time of commencing operation of the business activity.

Contravention of the 1990 bylaw is an offence punishable by a maximum fine of \$5,000.

In order to comply with the bylaw in its own disposal operations, the City purchased refrigerant recovery equipment and implemented a trial program for the recovery of refrigerant from discarded household refrigerators and freezers collected by the City's sanitation crews.

PROBLEMS/SUCCESES:

In 1990, the City of Toronto received a United Nations award in recognition of the City's leadership role in banning CFC's and its CO₂ initiatives. Due to budgetary restrictions, no staff have been assigned to enforcement of the bylaw on a full-time basis. The City's public health inspectors are expected to assume some of the responsibilities for enforcement and inspection guidelines are currently being prepared.

The City's refrigerant recovery program recovered only 3 kilograms of refrigerant from 2,423 refrigerators, 162 freezers, and 17 air conditioners. The refrigerant had completely escaped from 87% of the household appliances prior to collection and the remainder contained only minute quantities. The trial program, which cost \$16,000, was declared unsuccessful and discontinued. Since the amount of CFC's contained in refrigerant is about 15% to 20% of the total amount of CFC's contained in refrigerators and the remaining 80% to 85% is in the insulation, the City has decided to concentrate on the recovery of insulation material. It will also seek legislation for the manufacture of refrigeration equipment with insulation materials which are free of CFC's and energy efficient.

DOCUMENTATION:

Report from the Commissioner of Public Works and the Environment to City Services Committee, November 28, 1990, Trial Programme - Recovery of Refrigerant from Discarded Household Refrigerators and Freezers.

City of Toronto, Bylaw No.549-90, Respecting the prohibition and regulation of the use, recovery and disposal of certain products, material and equipment containing or manufactured with chlorofluorocarbons and halons, Passed October 1, 1990.

Environmental Protection Office (1989) Controlling CFC's in the City of Toronto: A Role for Local Government.

Memorandum from the Acting Medical Officer of Health to the Board of Health, November 14, 1988, A Chlorofluorocarbon (CFC) Reduction Strategy for Toronto.

Joint report from the Medical Officer of Health and the City Solicitor to Executive Committee, September 12, 1990, Proposed Amendments to the City CFC Bylaw No.230-89.

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INITIATIVE:

4.5 Packaging Bylaws

CURRENT STATUS:

Awaiting provincial approval

ORIGIN/MOTIVATION:

Proposed by a City Councillor.

CONTACT PERSON:

Pat Faran, Deputy City Solicitor, City of Toronto, City Hall, Toronto, M5H 2N2, (416) 392-7232.

DESCRIPTION:

The City has applied for special legislation to allow it to pass bylaws prohibiting or regulating the distribution, use and disposal of any material used for the purpose of packaging products for retail sale where such material is not:

- a. compatible with other reuse and recyclable initiatives;
- b. acceptable for return to the distributor of the product for reuse or recycling; or
- c. acceptable for curbside source separation recycling by the City.

Contravention of the bylaw would be punishable for a first offence to a fine not exceeding \$2,000 and, for subsequent offences, to a fine not exceeding \$25,000. Directors and Officers of a corporation who knowingly concur in the contravention of the bylaw would be liable to a fine not exceeding \$10,000.

PROBLEMS/SUCCESES:

The City's application for special legislation to deal with this issue is being modified in light of a new proposal coming from the Toronto Recycling Action Committee that restaurants in the City be required to use reusable dishes and cutlery. The City Solicitor is currently incorporating this proposal into the special legislation application. A response from the provincial government is expected in the Fall of 1991.

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INITIATIVE:**4.6 Waste Reduction and Recycling Programmes in New Developments****ADMINISTERED BY:**

Department of Public Works and Environment

CURRENT STATUS:

Implementation

CONTACT PERSON:

Eleonar McAteer, Development Coordinator, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7711.

COUNCIL APPROVAL:

1989

DESCRIPTION:

As part of the rezoning/development review process, all major development projects are now required to include waste reduction and recycling strategies as follows:

1. Submit a report, prior to the introduction of a bill in Council, on a Material Recovery and Waste Reduction plan satisfactory to the Commissioner of Public Works.
2. Design and construct the project in accordance with the above report.
3. The report must include the following:
 - a. a description of the waste composition which shall be generated by the development and the expected quantity of each category of waste material;
 - b. a description of the policies, programmes, processes and equipment which will be put in place to carry out material recovery and waste reduction;
 - c. the provision of space required to store and process recovered materials;
 - d. the provision of loading and unloading areas for material vehicles, including adequate vertical, horizontal and longitudinal clearance for manoeuvring of the vehicles;
 - e. access routes for recycling vehicles; and
 - f. separate accommodation for the recovery, safe storage and disposal of hazardous waste, if any.

The foregoing conditions become part of the collateral agreements issued during the rezoning/development review process.

PROBLEMS/SUCCESSSES:

City staff are currently developing waste management standards and/or targets and a checklist approach for these standards. Both are expected to be sent out for public comment before the end of the year.

DOCUMENTATION:

Report from the Commissioner of Public Works and Environment to the Land Use Committee and City Services Committee, September 20, 1989, **Waste Reduction and Recycling Programmes in New Developments.**

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INITIATIVE:

4.7 Transportation Demand Management Plans for New Non-Residential Developments

ADMINISTERED BY:

Public Works and the Environment

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:**CONTACT PERSON:**

Eleonar McAteer, Development Coordinator, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7711.

COUNCIL APPROVAL:

1991

DESCRIPTION:

All major new non-residential development projects must:

1. Submit a Transportation Demand Management (TDM) Plan for the review and approval of the Commissioner of Public Works and Environment addressing strategies to minimize automobile use related to the proposed development.
2. Have a qualified Transportation Engineer certify that the development has been designed and constructed in accordance with the approved TDM Plan.
3. Maintain and operate the facilities and strategies stipulated in the TDM Plan.

The types of measures that must be considered and addressed by developers in the preparation of the TDM Plan include incentives to use other modes such as public transit or bicycle by means of subsidizing transit fares and provision of bike parking facilities, control of the supply and operation of on-site parking, establishment of rideshare or carpooling programmes and implementation of variable work weeks and flex-time. The TDM Plan shall include:

- a. a description of the measures (policies, programmes, processes, facilities, equipment and manpower) which will be put in place to carry out and administer the Plan;
- b. an assessment of the anticipated morning and evening peak hour trip-making by travel mode if no TDM Plan was in place;
- c. an assessment of the anticipated reduction in morning and evening peak hour automobile trips which can be attributed to the TDM Plan. The targetted reduction is to be described, where applicable, in terms of percent and numeric reduction anticipated in peak hour vehicle trips, percent and numeric reduction anticipated in single occupant vehicles, and average

- d. vehicle occupancy in the peak hour;
an outline of measures to address auto travel reduction during off-peak time;
- e. a description of how the TDM will be integrated and operated;
- f. a description of the mechanisms which will be used to implement and administer the Plan, monitor, modify and enforce the Plan, and ensure the continuity of the Plan for the life of the development.

PROBLEMS/SUCCESES:

Existing legislation gives Council the authority to impose the above conditions on new developments involving Official Plan Amendment, Rezoning, Condominium and Subdivision applications. This authority may not exist for Development reviews, in which case the developer would be requested to to comply with the above conditions. City staff are currently developing auto minimization standards and/or targets and a checklist approach for these standards. Both are expected to be sent out for public comment before the end of the year.

DOCUMENTATION:

Report from the Commissioner of Public Works and Environment to City Services Committee, February 1, 1991, **Auto Minimization Strategies in New Non-Residential Developments.**

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INITIATIVE:

4.8 Water Conservation Strategies in New Developments

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Public Works and Environment

COUNCIL APPROVAL:

1991

CONTACT PERSON:

Eleonar McAteer, Development Coordinator, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7711.

DESCRIPTION:

All new development projects must:

1. Submit a Water Conservation Plan for the review and approval of the Commissioner of Public Works and the Environment, addressing strategies to conserve water within the proposed development prior to introduction of any necessary bills in Council, in the case of applications for Official Plan Amendments or Rezoning, and prior to City Council giving final approval in the case of applications for Development Reviews, Condominiums or Subdivision Agreements.

- 2. Have a qualified Consulting Engineer or professional designer certify that the development has been designed and constructed in accordance with the Plan;
- 3. Maintain the development to provide for water conservation in accordance with the Plan; and
- 4. Include the following elements in the Water Conservation Plan:
 - a. an inventory of all water and sewage related piping, equipment, fixtures and appliances;
 - b. a description of the policies, programmes, processes and equipment which will be put in place to conserve water and reduce the discharge of waste water; and
 - c. a Water Audit, including consumption rates and expected volume of water consumption and waste water generated by all equipment, fixtures and appliances.

PROBLEMS/SUCCESES:

Existing legislation gives Council the authority to impose the above conditions on new developments involving Official Plan Amendment, Rezoning, Condominium and Subdivision applications. This authority may not exist for Development reviews, in which case the developer would be requested to to comply with the above conditions. City staff are currently investigating the possibility of amending an existing bylaw to require the installation of water efficient fixtures for new buildings and for the replacement of existing plumbing fixtures or the installation of additional plumbing fixtures in existing buildings. City staff are also developing water conservation standards and/or targets and a checklist approach for these standards. Both are expected to be sent out for public comment before the end of the year.

DOCUMENTATION:

Report from the Commissioner of Public Works and the Environment to City Services, February 1, 1991, **Water Conservation Strategies in New Developments and All Other Buildings.**

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INITIATIVE:

4.9 Energy Efficiency and Conservation Programmes for New Developments

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Public Works and the Environment

COUNCIL APPROVAL:

1991

CONTACT PERSON:

Eleonar McAteer, Development Coordinator, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7711.

DESCRIPTION:

All new development projects must:

1. Submit an Energy Efficiency and Conservation Plan for the review and approval of the Commissioner of Public Works and the Environment, addressing measures for energy efficiency and conservation within the proposed development prior to introduction of any necessary bills in Council, in the case of applications for Official Plan Amendments or Rezoning, and prior to City Council giving final approval in the case of applications for Development Reviews, Condominiums or Subdivision Agreements.
2. Have a qualified consulting engineer/architect or professional designer certify that the development has been designed and constructed in accordance with the Plan;
3. Maintain the development to provide for energy efficiency and conservation measures in accordance with the Plan; and
4. Outline, in the Plan, proposed building design and mechanical equipment features whose performance standards will be based on the new standard of the American Society of Heating, Refrigerating and Air-Conditioning Engineers - ASHRAE Standard 90.1 - 1989 and future updates, and in case of residential buildings, on the Canadian Federal Standard R-2000. The Plan shall include the following:
 - a. a description of the measures to be incorporated in the design for the effective use of daylighting to offset the need for electric lighting;
 - b. a description of the electric lighting features and proposed measures to maximize the efficiency of the building component and to optimize overall energy consumption in conjunction with space heating and cooling;
 - c. a description of the proposed building envelope (walls, roof) and their annual performance criteria based on a cumulative combined heating and cooling energy flux;
 - d. a description of the various components and their performance criteria of the heating Ventilation Air-Conditioning (HVAC) systems and the approach of overall energy efficiency, including a life cycle cost analysis;
 - e. a description of proposed other electrical motors, equipment and systems, and their performance criteria including a life cycle cost analysis;
 - f. an assessment of the total system performance; and
 - g. a description of the proposed energy management system including a plan for operator training.

PROBLEMS/SUCCESSSES:

The City may not have the authority to impose the above conditions for Development Reviews and therefore will use the following procedure to implement the initiative:

1. impose a requirement on developers/owners of buildings which are subject to approval of a Plan of Subdivision, Rezoning or Official Plan Amendment to comply with the above energy efficiency and conservation conditions; and

2. include a request for developers/owners of buildings which are subject to Development Review to enter into a Collateral Agreement to provide for the energy efficiency and conservation measures described above.

City staff are currently developing energy efficiency and conservation standards and/or targets and a checklist approach for these standards. Both are expected to be sent out for public comment before the end of the year.

DOCUMENTATION:

Report from the Commissioner of Public Works and the Environment to City Services, February 1, 1991, **Energy Efficiency and Conservation in New Developments.**

INITIATIVE:

4.10 Noise Impact Statements for Rezoning Applications

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Public Works and the Environment

COUNCIL APPROVAL:

1974, Revised 1982

ORIGIN/MOTIVATION:

Resulted from recommendations made in a Noise Control Study conducted by the City in 1973.

CONTACT PERSON:

Eleonar McAteer, Development Coordinator, Department of Public Works and the Environment, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7711.

DESCRIPTION:

Applicants for zoning changes must submit a Noise Impact Statement providing the following data to ensure that their proposal is compatible with the sound environment of the area concerned:

1. Impact of Development on the Neighbourhood. A forecast of the impact of the sound from the traffic and/or industrial work sounds generated by developments is given together with an outline of the methods used to control these sounds from issuing into neighbourhoods.
2. Impact of the Neighbourhood on the Development. The applicant is required to provide an analysis of the effect of the existing sound environment on the development and the provisions proposed to control any undesirable effects on the development.
3. Impact of the Development on Itself. The applicant is required to show the provisions proposed for control of the sounds generated within the development.

The initial procedures for administering the above conditions were streamlined by dividing applications into the following three categories:

1. Class 1. Deals with minimum impacts that can be prepared by the proponent without the need of engaging a noise consultant.

2. Class 2. Deals with projects sited within a reasonable sound environment but where, for example, the impact of noise from an improperly-designed air handling system could generate undesirable noise for the adjacent neighbours. The proponent, with the assistance of an architect, can usually analyze the effects of developments in this class.
3. Class 3. Deals with developments where a problem with the sound environment would exist unless specific steps were taken to counter the problem. The proponent is usually required to engage an acoustic consultant to work with an architect and the consultant is required to certify that the plans prepared for the project have incorporated the noise attenuation features required by the impact statement. In some instances, the consultant may also be required to certify that the noise attenuation features have been properly put into place in the completed project.

DOCUMENTATION:

Report from the Commissioner of Public Works to Land Use Committee, January 11, 1984, **Noise Impact Statements.**

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INITIATIVE:

4.11 SUD Component in Proposed New Central Area Plan

ADMINISTERED BY:
 Planning and Development

CURRENT STATUS:
 Conceptual design

ORIGIN/MOTIVATION:
 Five-year review of the City's Official Plan

CONTACT PERSON:
 John Gladke, Director, Policy and Strategic Planning Division, Planning and Development Department, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-7186.

DESCRIPTION:

The Cityplan '91 process for updating the City's Central Area Plan has progressed to the stage where a proposals report or draft plan has been presented for public review. Some of the policies in the proposals report with relevance for sustainable urban development include the following statements on the City's intentions:

1. Contaminated Lands. Seek to ensure that development does not occur on any site within the City that presents a health risk caused by contaminated soil and that no development be permitted on a site containing contaminants without its risk to health being evaluated and, where appropriate, a full soil management study being completed and necessary mitigation measures employed.

2. **Energy Efficiency.** Endeavour to have energy-efficient measures adopted in new developments and promote and facilitate the retrofitting of existing buildings to incorporate energy efficient measures, such as passive solar heating/cooling and the use of renewable energy resources, wherever feasible and to the fullest extent possible, in order to reduce energy consumption and energy loss within the City. To this end, Council shall encourage a 15% reduction of 1991 levels of energy consumption for all buildings on average within the City by the year 2006.
3. **Human Comfort.** Set standards for wind exposure and sun availability, restriction of shadows for passive and active recreation spaces, retail strips and streets in general, which will assist in determining permissible built form envelopes and design.
4. **Natural Areas.** Within designated Natural Areas which are publicly owned, seek legislative authority to permit:
 - a. only such land uses as are compatible with the principles of preserving and conserving such areas. Such land uses may include low impact leisure uses and activities, such as walking, cross-country skiing, teaching or research activities or wildlife and natural area management activities;
 - b. only minimal development required to support these activities and such public works for which no reasonable alternates are available and provided these are designed to have only minimum adverse ecological and environmental impact, on the basis of a report setting out how the development meets the requirements of this statement.
5. **Natural Areas.** In areas adjacent to designated Natural Areas, encourage only that development which has minimal adverse environmental impacts and is sensitive in its design to the environmental qualities of the Natural Area by:
 - a. encouraging a buffer zone of 10 metres adjacent to Natural Areas within which development is to be prohibited and, where this is clearly impractical, providing as large a setback from the boundary of the Natural Area as possible;
 - b. encouraging the submission of environmental impact evaluations to be made in association with development review applications for developments that are adjacent to Natural Areas.
6. **Environmentally Sensitive Areas.** Environmentally Sensitive Areas (ESA's) are those portions of Natural Areas that are particularly sensitive and require additional protection to preserve their significant qualities. Within all ESA's, prohibit, subject to obtaining legislative amendments, if necessary, any and all development, and limit activities to those which are compatible to the preservation of the area's qualities. ESA's may have the following characteristics:
 - a. habitat for rare, threatened, unusual or endangered plant and/or animal species and communities that rare threatened or endangered within the City, Metropolitan Toronto, the Province or Canada; or

- b. rare, high quality or unusual landform or geomorphological processes within the City, Metropolitan Toronto, the Province or Canada; or
 - c. the ecological function of the area contributes significantly to the healthy maintenance of a natural ecosystem beyond its boundaries by serving as a wildlife migratory stopover or concentration point, or serves as a linkage corridor of suitable habitat between natural biological communities, or serves as a water storage or recharge area; or
 - d. an unusually high diversity of otherwise commonly encountered biological communities and associated plants and animals.
7. Advisory Committee. Establish an Ecological and Environmental Advisory Committee that would be willing and capable of offering the City and, desirably, the other area municipalities, expertise in subjects such as botany and wildlife biology, in order that the Natural Areas are satisfactorily protected.
8. Don River. Participate within the limits of its jurisdiction to regenerate the entire Don River to a natural form, function and habitat and undertake a Part II Plan and a Community Improvement Plan along that part of the Don River within its jurisdiction.
9. Tree Planting. Promote the planting of a variety of native trees in private and public spaces in order to promote nature within the City, reduce carbon dioxide, provide visual buffers to unattractive sites and promote natural habitat continuity and linkages for wildlife.
10. Tree Removal. Encourage the preservation of existing trees on public and private property in the City and seek legislative authority from the province to prohibit the cutting of trees on private lands.
11. Development Performance Standards. Develop and employ, to the extent of its legislative capacity, a comprehensive set of Environmental Development Performance Standard which shall cover, at a minimum, the following: car use reduction and car parking reduction, contaminant and pollutant emission reduction, waste management, energy conservation, indoor air quality, storm water management, water conservation, noise and vibration minimization, pedestrian comfort, environmental management of construction and demolition, contaminated land, its remediation, reuse and contaminant disposal, and flood management and control. Until development standards are developed, request the proponents of any development over 10,000 sq.metres to provide an environmental report showing how the development has been designed to address the environmental issues set out in the above statement.
12. Air Quality. Encourage a reduction in the quantity of carbon based fuels used within the City by:
- a. adopting as an objective the reduction of CO2 emissions from all sources within the City by 20% of the 1991 levels by the year 2006;
 - b. seeking to improve the quality of emissions that result from burning carbon based fuels in vehicles, buildings or any other activity in the City;

TORONTO

- c. adopting as an objective the reduction of carbon monoxide, hydrocarbon and oxides of nitrogen emissions from vehicle exhausts, furnace flues and smokestacks by 20% of the 1991 levels by 2006, without an increase in other noxious emissions;
 - d. adopting as an objective the reduction of sulphur dioxide and nitrogen dioxide emissions by 25% of 1991 levels by 2006;
 - e. promoting measures to reduce private automobile use within the City;
 - f. promoting the proper maintenance and use of cleaner combustion and cleaner exhaust systems in vehicles and heating systems of buildings within the City; and
 - g. promoting and facilitating the provision and use by residents, workers and visitors of alternate means of transportation such as public transit, including surface transit, cycling, and walking and encourage such activity by providing a pleasant pedestrian environment.
13. Water Quality. Seek to eliminate the need to post notice of health hazards at public beaches because of water pollution by the year 2001 and reduce the use of manufactured chemical pesticides within the City from all sources by 50% of 1991 levels by the year 2001.
14. Water Conservation. Seek to reduce water consumption by 10% on a per capita basis of the 1991 levels by the year 2001.
15. Waste Reduction. Adopt an objective of a 50% reduction of solid waste in the City by the year 2001, with 1991 taken as the base year.
16. Hazardous Waste. Encourage all significant generators of hazardous wastes in the City to complete hazardous waste audits and waste reduction plans by the year 2001 and seek to ensure that environmentally acceptable methods for handling, storage and disposal of hazardous waste products are put in place and maintained in all new developments within the City that will generate, transport or store such waste.
17. Main Streets. "Main Streets" are major streets with mixed commercial and residential uses, with a predominant character that consists of contiguous buildings of two to five storeys in height. Encourage the addition of residential units on these streets as the primary location for intensification in low density neighbourhoods.
18. Arts Policies. Seek legislation to authorize applying the one percent for public art policy to all development proposals exceeding 20,000 sq.metres of gross floor area including as of right development, except for social housing projects.
19. Arts Policies. Seek legislation to require that developments in excess of 25,000 sq.metres of gross floor area provide 25% of the 1% allocation as a cash contribution to the Municipal Public Art Development Fund, to be used for the purpose of supporting public art on a City-wide basis.

20. Industrial Lands Preservation. Do not consider the redesignation of industrial land so as to permit any non-industrial use in designated areas without first having considered a study of the area undertaken for the purposes of recommending policies for adoption in Part II of this Plan. Such study shall have regard for: the number and types of industrial firms and employees in the areas that would be adversely affected, the impact on any surrounding industrial lands that would not be redesignated, and the environmental condition of the lands and the need for soil decommissioning.
21. Safe City. Adopt guidelines respecting issues of safety and security for the purposes of reviewing developments.
22. Linkage Fees. Seek legislative authority to put in place a Housing Employment Linkage Fee on all new commercial development in the City, sufficient to address at least one half of the additional need for affordable housing arising from the increase in low wage service sector jobs attributed to new commercial development.
23. Inclusionary Zoning. Seek legislative authority which would enable Council to require that private market housing developments contribute toward provision of Affordable Housing.
24. Affordable Housing. In redesignating any lands for residential purposes, require that at least one half of all new housing provided within such lands be provided in the form of affordable housing and that one quarter of all new housing provided within such lands be provided in the form of housing suitable for families with children.
25. Residential Intensification. Encourage residential intensification through creation of rooming, boarding and lodging houses, creation of Accessory Apartments, conversion of non-residential structures to residential use, infill, and redevelopment.
26. Bicycles. Implement programs which facilitate and support greater and safer use of the bicycle as a mode of transport, including:
 - a. the development of a network of on-street and off-street bike lanes and paths;
 - b. encourage the development of road design and maintenance standards which reduce the risk of accidents and injuries to cyclists;
 - c. securing bicycle parking facilities at subway and GO stations to encourage combined bicycle/transit trips;
 - d. requiring new major developments to provide secure bicycle parking and, where appropriate, shower/change facilities for bike commuters.
27. Increase Auto Occupancy Levels. Promote the more efficient use of the private automobile by supporting measures to increase auto occupancy levels, including promotion of ride-sharing, promotion of reserved lanes for high occupancy vehicles, and introduction of preferential parking arrangements for high occupancy vehicles.

28. Land Use/Transportation Relationships. Seek to achieve a balanced pattern of development growth based on an assumed average rate of office space absorption of 128,000 sq.metres and a targeted average annual rate of housing production of 3,500 additional units in the Central Area up to the year 2001.
29. Public Transit. Support measures to increase the capacity, enhance the attractiveness and improve the operational efficiency of surface transit, including consideration of reserved transit lanes and priority for transit vehicles at traffic signals.
30. Limited Auto Commuting Levels. Limit auto commuting levels to present volumes by adopting appropriate measures to control the number of autos used for commuting into and out of the Central Area, with particular attention to the supply of Central Area parking.

DOCUMENTATION:

City of Toronto Planning and Development Department (1991) Cityplan '91 Proposals Report.

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INITIATIVE:

4.12 Healthy Toronto 2000

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

Results of a conference held in Toronto on healthy cities.

CONTACT PERSON:

Diana Baxter, Manager, Healthy City Project, Healthy City Office, City of Toronto, Suite 219, 40 Dundas St. West, Toronto, Ontario, M5G 2C2, (416) 392-0099.

COUNCIL APPROVAL:

1988

DESCRIPTION:

The Healthy Toronto 2000 report recommends adoption of the following health goals for the Department of Public Health:

1. Increase health expectancy among the people of Toronto.
2. Create healthful environments and protect the people of Toronto from health hazards.
3. Enable the people of Toronto to develop health promotion skills and achieve their health promotion potential.
4. Plan for health and provide health data for the people of Toronto.
5. Promote and foster the Healthy City Initiative in all aspects of City life and government.

In addition, it recommends that all departments address the following concerns:

1. Work with those with the greatest inequalities in health.
2. Initiatives must be culturally appropriate and directed to those communities with the greatest inequalities.
3. Initiatives must be developed with the community and must serve to facilitate the strengthening and empowerment of the community.

The report includes 89 recommendations under the following topic headings: establishment of a Healthy Public Policy Committee, establishment of a Healthy City Office, establishment of an Inter-departmental Healthy City Workgroup, housing and health, food for health, income and work, education for health, urban planning for health, transportation planning, accident prevention, sustainable community, community empowerment, community support, a Safe City, women and power, advocacy for a community-based health services system, healthy parents and healthy children, healthy seniors, health at school, health at work, promoting mental health, heart health, cancer prevention, preventing substance abuse, healthy eating, dental health, healthy sexuality, community sanitation and environmental protection, communicable disease control, health promotion skills, health communications, health planning, health data collection and dissemination, health research, creation of a Healthy City Strategy Section, staff development, and education and training of community health professionals.

PROBLEMS/SUCCESES:

Many of the recommendations have been implemented to date, most notably the recommendations that a Healthy City Office be established.

DOCUMENTATION:

City of Toronto, Board of Health, Healthy Toronto 2000 Subcommittee (1988) **Healthy Toronto 2000**.

Board of Health Report No.11 to City Council, September 10, 1990, **Status Report: Recommendations Contained in Healthy Toronto 2000 Report.**

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INITIATIVE:

4.13 Toronto State of the Environment Report

CURRENT STATUS:

Completed

PREPARED BY:

Environmental Protection Office, Department of Public Health

CONTACT PERSON:

Robert Gale, Manager, Environmental Protection Office, Department of Public Health, City of Toronto, 12 Shuter St., Toronto, Ontario, M5B 1A1, (416) 392-6788.

DESCRIPTION:

The report reviewed a number of environmental indicators and identified possible actions for improvement. The report covered the following topics:

1. Air quality: sulphur dioxide, carbon monoxide, nitrogen oxides and nitrogen dioxide, ozone, total suspended particulates, lead, indoor air quality, initiatives for air quality improvement.
2. Water quality: drinking water, recreational water quality, fish consumption, aquatic habitats and biota, sources of contaminants on Toronto's waterfront, initiatives for water quality improvement.
3. Land use and environment: green space, soil contamination, transport of dangerous goods by rail and road, vehicle traffic, transportation initiatives, waste disposal by incineration, recycling, initiatives in waste management.

The report concluded that Toronto's air quality was considered to be satisfactory but water quality for recreational uses, and to a lesser extent for drinking, was considered to be impaired. Toronto has been successful in maintaining substantial amounts of green space in the City. Soil quality has been impaired in some neighbourhoods but remedial programs have addressed the problem. Unexpected increases in solid waste generation by industry and the general public was a concern.

DOCUMENTATION:

City of Toronto Department of Public Health (1988) Toronto: **State of the Environment.**

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INITIATIVE:

4.14 Creation of a position in Environmental Planning

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Planning and Development

ICURR Intergovernmental Committee on Urban
and Regional Research

Comité intergouvernemental de recherches
urbaines et régionales

CIRUR

ORIGIN/MOTIVATION:

Recognition by senior staff that a planner with environmental expertise would be needed in the development of the Official Plan's environmental policies. An environmental planner was hired and worked in the department for a year on a contract basis until the position became permanent.

CONTACT PERSON:

Chris Morgan, Senior Environmental Planner, Planning and Development Department, City of Toronto, City Hall, Toronto, Ontario, M5H 2N2, (416) 392-0068.

COUNCIL APPROVAL:

1991

DESCRIPTION:

Tasks of the position to date have included input to the City's Official Plan review, development of long and short term flooding policies, identification of natural areas and protection criteria, and responding to requests of a technical nature from any level of government that might have environmental implications.

PROBLEMS/SUCCESES:

There are so many demands on time to deal with municipal issues in the environmental area that most of the work tends to be reactive in nature.

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INITIATIVE:

4.16 Waste Reduction/Recycling Program

CURRENT STATUS:

Various stages

ADMINISTERED BY:

Public Works and Environment

CONTACT PERSON:

Don Young, Manager, Material Management, Department of Public Works and the Environment, City of Toronto, 505 Richmond St. West, Toronto, Ontario, (416) 392-7721.

DESCRIPTION:

Current initiatives of the City's waste reduction/recycling program include:

1. Blue box recycling of newspapers, cans, glass bottles and jars, telephone books, corrugated cardboard, plastic bottles and jugs (implemented); mixed plastics, boxboard, other paper products (under consideration).
2. Apartment recycling of newspapers, cans, glass bottles and jars, telephone books, corrugated cardboard, plastic bottles and jugs (implemented); mixed plastics, boxboard, other paper products (under consideration).
3. Recycling in institutions (schools, community centres, fire halls, police stations, hospitals, and government offices) for recovery of newspapers, corrugated cardboard, telephone books, glass bottles and jars, cans, and plastic bottles and jugs (largely implemented).
4. Restaurant and tavern recycling of glass bottles (implemented).
5. Restaurant recycling of newspapers, corrugated cardboard, telephone books, glass bottles and jars, cans and plastic bottles and jugs (being implemented).
6. Retail store collection of corrugated cardboard (implemented); newspapers, telephone books, cans, glass bottles and jars, plastic bottles and jugs (to be implemented - fall 1991)
7. Residential curbside collection of white goods, yard wastes (grass clippings, leaves, hedge clippings, brush), Christmas trees (implemented).
8. Recycling depots for cans, glass bottles, and dry cell batteries (implemented).
9. Recycling of cans and glass bottles in city parks and shopping plazas (pilot project).

10. Diversion of excavated asphalt and concrete (implementation)
11. Preparation and distribution of an office fine paper guide (implemented).
12. Provision of technical assistance to private companies for the establishment of office paper recycling programs (implemented).
13. Requirement for new development projects to prepare and implement waste reduction and recycling programs as part of the Rezoning/Development Review Process. About 50% of the waste expected to be generated by 85 developments reviewed to date will be diverted by approved waste reduction and recycling programs (implemented).
14. Requirement that all newspaper publications distributed from vending boxes on public street allowances contain a minimum 50% recycled fibre (approved).
15. Requirements for the use of reusable and recyclable dishes and tableware in restaurants (under consideration).
16. Recycling containers on public street allowances in areas of high pedestrian traffic for recovery of newspapers and beverage containers (implementation).
17. Promotion of waste reduction initiatives in schools (implemented).
18. Hotel recycling program (pilot project).
19. Junk mail restrictions (conceptual design).
20. Bylaws regulating the distribution, use and disposal of packaging materials in retail stores (conceptual design).
21. Bylaws requiring mandatory source separation in the residential, institutional, and commercial sectors (under consideration).
22. Reduction of garbage collection services from twice-weekly to once-weekly (under consideration).
23. Food waste recycling program for restaurants, taverns, and food handling plants (under consideration).
24. Modification of the garbage collection process to ensure that no plastics reach landfill sites (under consideration).
25. Residential wet-dry curbside collection program (pilot project - fall 1991).
26. City Council is seeking legislation from the Ontario Government to control packaging and implement a deposit system for the reuse of all beverage containers.
27. Consultation with the Toronto Recycling Action Committee, a city-appointed citizen's advisory committee (established 1974).

PROBLEMS/SUCSESSES:

The provincial government is pushing municipalities to take action on waste reduction and recycling but at the same time seems to be making it more difficult for municipalities to do so. For example, the City has been collecting and recycling white goods for several years but the Ministry of Environment has now declared that white goods cannot be shredded because about 25% of pre-1977 refrigerators had motor capacitors that contained PCB's. The City's shredding contractor is willing to remove the capacitors at a price of \$10 each, but this would increase the cost of the program substantially. The issue is currently unresolved and white goods are being "baled" on a month to month

basis by the contractor.

DOCUMENTATION:

Memorandum from the Commissioner of Public Works and the Environment to City Services Committee, January 25, 1991, **Expansion of the City of Toronto's Material Reduction and Recycling Programmes.**

Memorandum from the Commissioner of Public Works and the Environment to City Services Committee, February 18, 1991, **Progress Report - Waste Reduction and Recycling Programmes for New Developments.**

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ICURR Intergovernmental Committee on Urban
and Regional Research
Comité intergouvernemental de recherches
urbaines et régionales **CIRUR**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Utility Services Department

CONTACT PERSON:

Barry J. Poulton, Director, Utility Services Department, City of Peterborough, 500 George Street North, Peterborough, Ontario, K9H 3R9, (705) 742-7771.

DEFINITION OF SUD:

Sustainability does not necessarily have anything to do with development. Sustainability implies activities which are not detrimental to the environment and which replace anything withdrawn.

INITIATIVES:

1. Compliance with the requirements of the provincial Environmental Assessment Act (implementation since 1987)
2. Compliance with the provincial Municipal Industrial Strategy for Abatement and establishment and enforcement of a sewer use bylaw (implementation)
3. Storm water management ponds (implementation)
4. Waste reduction (various stages)
5. Conversion of some city vehicles to propane (implementation)
6. "Transcab" system offering city-subsidized taxi service to some areas of the city at certain times (implementation)

COMMENTS:

The MISA program has been particularly successful. It has been well received by local industry and the City has not yet had to take any businesses to court.

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ORGANIZATIONAL UNIT:

1.2 Community Services Department (Includes Parks, Recreation and Social Services)

CONTACT PERSON:

Peter Southall, Manager, Parks and Forestry Division, The Board of Park Management, City of Peterborough, 500 George Street North, Peterborough, Ontario, K9H 3R9, (705) 742-7771.

DEFINITION OF SUD:

Policy and delivery of services such as to ensure sustainability of the biosphere. It also involves social, economic, spatial and cultural aspects.

INITIATIVES:

- 1. Open space preservation (implementation)
- 2. Tree planting program (implementation)
- 3. Park naturalization (implementation)

COMMENTS:

Conservation and development should not necessarily be perceived to represent a dichotomy in the balance of natural processes. Perhaps the greatest problem we face is that our current urban landscape, in its present form, is largely artificial. As such, it is not sustainable. To be sustainable, the urban form needs to be integrated within a balanced energy ecosystem. We should adopt the philosophy of a sustainable biophysical region in which urban impacts are mitigated. What, however, is not yet clear is whether the public and political will is sufficient to make the financial and social commitment to achieve environmental enhancement and sustained performance. The Parks and Forestry Division's commitment to environmental issues is embodied in the Division's Statement of Purpose. One of the Division's goals is "To protect, conserve and enhance the natural environment for the benefit, use and enjoyment of the public" and "To promote patterns of open space development that improves the quality of the City's natural environment".

ORGANIZATIONAL UNIT:

1.3 Planning and Development

CONTACT PERSON:

Les Groombridge, Director, Planning and Development Department, City of Peterborough, 500 George St. North, Peterborough, Ontario, K9H 3R9, (705) 748-8881.

DEFINITION OF SUD:

Doing things in a way that you can continue sustaining development.

INITIATIVES:

- 1. Inventory of natural areas in the municipality (implementation)
- 2. Storm water management ponds (implementation)

COMMENTS:

The City is highly supportive of industries trying to improve their waste reduction efforts and of environmental industries who might wish to locate in the City. However, the real key to achieving progress on sustainable development is the behaviour of individuals, not of industry. More education is essential to help individuals become aware of what they can do on an every day basis to reduce pollution and improve environmental quality.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

2.1 Solid Waste Coordinator's Office

1989

STAFF:

3

CONTACT PERSON:

Ivan L. Bateman, Solid Waste Coordinator, Utility Services Department, City of Peterborough, 500 George St. North, Peterborough, Ontario, K9H 3R9, (705) 748-8890.

INITIATIVES:

1. Hiring of a Solid Waste Coordinator with responsibility for waste reduction initiatives, and two assistants (implementation)
2. Introduction of a tipping fee at the City's landfill (implementation)
3. Construction and commissioning of a materials recovery facility (implementation)
4. Blue Box recycling of newspaper, glass, cans and PET (implementation)
5. Blue Box recycling of plastic film (implementation)
6. Household hazardous waste collection days (implementation)
7. Reduction in the number of garbage containers collected per household from 18 prior to 1990 to six in 1990 and four in 1991 (implementation)
8. Household "user pay" system for domestic garbage (conceptual design)
9. "Closed loop recycling" program for fine paper recycling in local schools and two post-secondary institutions. Paper will be sent to a paper recycling company which will produce paper intended for the educational market (implementation)
10. Apartment recycling (being implemented)
11. Permanent household hazardous waste transfer depot (conceptual design)
12. Curbside collection and recycling of white goods, leaves and Christmas trees (implementation)
13. Backyard composting program (implementation)
14. Establishment of a leaf composting site for residential and street leaves (implementation)
15. Municipal Composting Plant (feasibility study)
16. Waste characterization study, by means of visual inspection, of Industrial/Commercial/Institutional waste delivered to the City's landfill (implementation)
17. Establishment of a five bin system at the City's landfill site for separate receipt of such materials as metals, tires and other materials for which markets may arise. Materials will be removed to recycling facilities when truckload quantities are accumulated (conceptual design)

- 18. Material bans at the City's landfill (approved in principle by City Council). Corrugated cardboard ban will begin October 1st, 1991.

PROBLEMS/SUCCESES:

In 1987, Peterborough became one of the first cities in Ontario to initiate a city-wide Blue Box recycling program. Through the Blue Box program and other initiatives, waste delivered to landfill has been reduced by 20% since 1989. Rigid plastics, other than PET, are not collected in the City because there is a problem with collection fleet capacity, which has not kept pace with the rapid expansion of volume collected. A new truck will be delivered in 1991 and possibilities for collection of rigid plastics will be reviewed. Boxboard is another potential candidate for the Blue Box and trials in a nearby county are being followed to determine marketing prospects. The public is responding well to the recycling opportunities being provided and is demanding more, especially because of local, regional and national media attention on the issue. One concern is that the provincial requirements for establishing recycling facilities, such as a household hazardous waste transfer facility, seem to be more stringent for the public sector than for industry.

DOCUMENTATION:

Bateman, I.L. (1991) **Waste Diversion Strategies in the City of Peterborough**, Report prepared for the Utility Services Department, City of Peterborough.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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COMMITTEE NAME:

DATE ESTABLISHED:

3.1 Committee on Sustainable Development Environmental Committee on Research 1988

ORIGIN/MOTIVATION:

A number of members of the community who attended a conference at Trent University on global sustainable development problems approached the Mayor and suggested that Peterborough launch a local initiative on sustainable development.

REPORTS TO:

BUDGET:

City Council

\$20,000

MEMBERSHIP:

25 members with representatives from business, community, labour, religious and environmental organizations, City staff and City Council (including the Mayor).

CONTACT PERSON:

Robert Paehlke, Chair, Committee on Sustainable Development, Environmental and Resource Studies, Trent University, Peterborough, Ontario, K9J 7B8, (705) 748-1817.

DESCRIPTION:

Sub-committees of the Committee on Sustainable Development (CSD) include: Priorities and Planning, Community Liaison and Education, Business and Industry, and Special Projects.

INITIATIVES:

1. Task Force on Sustainable Development Report.
2. Bike Day.
3. Sponsorship of awards to business and individuals for waste reduction and energy conservation.
4. Sponsorship of the Peterborough Ecology Garden.
5. Advising the City on "greening" the Peterborough Official Plan.
6. Community education programs.

PROBLEMS/SUCCESES:

The strength of the Committee is that it cuts across sectors by bringing together community, government, environmental and business organizations although, in tough economic times, it becomes more difficult to keep the business sector involved. The Committee does not have sufficient funds for a regular staff person but rather relies on volunteer and student help to take minutes and distribute agendas.

COMMITTEE NAME:**DATE ESTABLISHED:**

3.2 Task Force on Sustainable Development

1989

BUDGET:

\$5,000 from the City of Peterborough through the Sustainable Development Committee, plus grants from Environment Canada, Ontario Ministry of Environment, Peterborough Real Estate Board and Ethicon Ltd.

ORIGIN/MOTIVATION:

A public forum on Our Common Future was held in the City in October, 1989, that was attended by 300 people from all sectors of the Peterborough area community and resulted in recommendations for local action to achieve swimmable beaches, solid waste reduction, environmentally appropriate land use, cleaner production and products from business and industry, and various other goals of "sustainable development". The Forum was coordinated by the local roundtable on environment and economy, the Peterborough Committee on Sustainable Development. One of the initiatives resulting from the Forum was the establishment of the Sustainable Development Task Force.

REPORTS TO:

The general community.

STAFF:

1

MEMBERSHIP:

The Task Force consists of five members from the Peterborough Area community. More than 80 people contributed to the multi-sectoral discussions and recommendations.

CONTACT PERSON:

Jill Stocker, Sustainable Development Task Force Chair, Sir Sandford Fleming College, Peterborough, Ontario, (705) 749-5530.

DESCRIPTION:

The Task Force report covers the Peterborough area, which includes the City of Peterborough and Peterborough County. It was prepared during a six-month period, from July to December, 1990. The objective of the Task Force was to refine an agenda begun at the Our Common Future forum for local action through background research and further community discussion. A further objective was to promote implementation by identifying priorities, increasing knowledge and awareness, and building stronger links among citizens, organizations, businesses, government officials and other groups. The process for preparing the report involved initial evaluation of discussion papers prepared by the Task Force's coordinator on six subject areas and, after a broadly based consultation process, incorporation of the revised papers as chapters in the final report.

INITIATIVES:

The Task Force adopted the following guiding principles on sustainable development from the Ontario Round table on Environment and Economy as a basis for its recommendations:

1. Anticipating and preventing. (Dealing with the causes of problems, not just the results.)
2. Full-cost accounting. (Including long-term and public costs in evaluation.)
3. Informed decision-making. (Seeking the best available information as a basis for action.)
4. Living off the interest. (Relying on renewable resources instead of depleting the "natural capital" of our ecosystems.)
5. Choosing quality of development over quantity. (Introducing better production and consumption habits.)
6. Respecting nature and the rights of future generations. (Considering the impacts of our behaviour on nature and all future inhabitants of Earth.)

The recommendations of the report, categorized by general area of concern, are as follows:

Regional Development

1. Community forums should be held to address Greater Toronto Area (GTA) concerns.

2. Municipal statements that address long-term community vision, GTA relationships, etc. should be developed.
3. The area's economic base should reflect the need for sustainability by maximizing opportunities for locally-based living, working, shopping and recreation.
4. An extensive Green Belt should be established and maintained through development controls and dense nodal growth between Peterborough County and the GTA.

Local Decision-Making and Policy

5. The relationship between Peterborough County and City needs to be restructured.
6. Municipal policies should be reviewed according to sustainability criteria.

Community Animation

7. All major local organizations, public and private, should convene temporary Sustainable Development Advisory Committees (SDAC) as a means of developing longer term expertise, policies and standards.
8. A Peterborough Green-Up should be held to educate or train residents on ways to implement sustainable development in their home settings.
9. All organizations should sponsor environmental staff training and educational workshops to ensure that workers have up-to-date environmental knowledge and skills.
10. The Peterborough Committee on Sustainable Development (SDC) should: a. clarify what it is supposed to do; b. either become a County-City body or convene a regional/bio-regional sub-committee; and c. obtain resources to hire a temporary community animator.

Monitoring and Targets

11. Peterborough Area State of the Environment (SOE) reports should be issued every three years (every five years once well established) by County and City governments or by funded independent organizations.
12. Special municipal targets relating to sustainable development should be established as public challenges and rallying points.

General Municipal Opportunities

13. Compile land use inventories as a basis for sustainable land use planning.
14. Emphasize environmental and sustainable development criteria in in-service training for municipal staff.
15. Acquire abandoned railway lines to create linear parks and travelways.

Urban Intensification and Rural Land Use

16. Adopt Compact Community policies that include intensification strategies.
17. Undertake intensification demonstration projects with a strong public education component to promote Compact Community ideas.
18. Sponsor a forum for all intensification stakeholders to develop common community understandings.
19. Convene a temporary rural development management working group to generate strong rural land use policies and strategies.

20. Undertake land use suitability studies to guide long-term expansion and annexation needs of urban municipalities.

Design Criteria and Standards for New Development

21. Solicit advice from all sectors of the community to develop new guidelines and standards for environmentally appropriate developments.
22. Modify Site Plan Reviews to include a variety of sustainable development criteria, ranging from natural landscaping to energy efficiency, transportation planning and waste management.
23. Develop local building bylaws to ensure that new building developments reflect sustainable development criteria.
24. Initiate a Sustainable Subdivision demonstration project.

Local Transportation

25. Transportation studies should be based on the demand-supply plan model.
26. Community and corporate/institutional vehicle pooling strategies should be developed to reduce the number of single occupant vehicles on the roads.
27. Organizations with vehicle fleets should switch to less environmentally costly fuels.
28. Bicycles should be encouraged as a valid form of transportation.
29. Include bicycles in the policy mandate of transportation departments.
30. Organize a Bicycling Advisory Group to advise municipalities on bicycle planning.
31. Promote bicycle transportation to increase public awareness of bicycle transportation opportunities.
32. Upgrade bicycle parking and transportation routes in areas under both municipal and private jurisdiction.
33. Introduce police bicycle patrols.
34. Encourage and promote pedestrian paths through urban areas.

Natural Areas and Ecological Protection

35. Develop a Conservation Strategy for the Peterborough Area.
36. Initiate a Peterborough Green-up to encourage the natural restoration of private lands.
37. Create and distribute a "how to" natural green space brochure to provide basic and useful information for the interested public.
38. A highly visible naturalized green space demonstration project should be initiated.
39. Site manager training seminars should be initiated to provide natural green space in-service training.
40. Establish a Peterborough Naturescape Award to raise the profile of local natural area work in a positive way.
41. Review and advise all Official Plans to establish natural area definitions, designations, standards and targets.
42. Develop Environmental Protection and Natural Area land use designations for Official Plans and Zoning Bylaws to clarify the status of natural areas and lands in need of ecological protection.
43. Include natural space design guidelines in the Site Plan Review process.

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44. Adopt policies to protect and plant trees along existing streets, in park and agricultural border areas and in new developments.
45. Establish a green belt around the perimeter of the City of Peterborough.
46. Municipal parks and recreation committees should include natural areas advocates and natural recreation representatives.

Water Jurisdiction

47. Initiate comprehensive water management in the Peterborough area through a Regional Water Working Group.
48. Enhance the knowledge base of water managers through an ongoing seminar-workshop series.

Water Conservation

49. Include the capacity for water meters in new developments to provide the base for "user-pay" water consumption.
50. Implement stronger lawn watering regulations to reduce the summer water use peak in serviced municipalities.
51. Develop an information/education brochure to explain and promote ideas of landscaping that are less "watering intensive".
52. Enhance existing water conservation programs and continue them where their utility is demonstrated.
53. Provide rain barrels or subdivision cisterns with pumps for lawn and garden watering.
54. Undertake a non-watered landscaping demonstration project to show leadership in summer water-use reduction.
55. Implement and publicize lawn watering reduction policies to demonstrate community leadership.
56. Develop building bylaws to encourage water conservation.

Beaches/Stormwater

57. Proclaim water quality program targets, including a timetable of pollution reduction goals.
58. Develop an information/education brochure explaining why the beaches are often closed and how the public can contribute to water pollution solutions.
59. Initiate and/or enforce stoop-and-scoop bylaws to reduce some of the noxious component of stormwater runoff.
60. Initiate a Best Management Practices stormwater demonstration project to showcase the best available designs.
61. Continue to upgrade stormwater planning, policy and management standards.
62. Initiate rural remedial programs to reduce the agricultural contribution to bacterial contamination of water.

General Water Management

63. Compile baseline data for stormwater planning across the region to prepare for future development outside of existing urban areas.
64. Establish a local watchdog-monitoring organization for the City of Peterborough.

Energy

65. Establish a Peterborough County-City Energy Conservation Office.
66. Create a Sustainable Energy Planning Group.
67. Organize an Energy Trade Fair to promote efficient products and processes.
68. Organize temporary energy referral groups to ensure that existing government energy programs are used as well as possible.
69. Designate the Peterborough area as a test or demonstration region for energy efficiency delivery by utilities.
70. Adopt flattened or increasing block rate structures for electricity, or base pricing on energy efficiency performance.
71. Establish Energy Efficiency Advisory Committees.
72. Distribute a high profile energy efficient product as a promotion to provide a tangible "lead-in" to larger energy management programs.
73. Establish electricity use-reduction targets.
74. Enhance existing energy efficiency programs.
75. Lease a variety of the most energy efficient appliances available.
76. Review the effectiveness of utility bill inserts and print conservation information directly on the utility bill itself.
77. Encourage the local utility commissioners to write a letter to the Ontario government outlining the constraints imposed by the government on local utility commissions' abilities to implement efficiency and conservation programs and identify opportunities for improvement.
78. Organize sectoral energy conservation workshops for various user groups.
79. Retain the community energy consultant position to serve the needs of local businesses and institutions.
80. Establish demonstration projects within schools.
81. Review municipal policies for their impact on energy use.
82. Develop local building bylaws to upgrade energy efficiency requirements.
83. Convert City of Peterborough buses to natural gas fuel.
84. Establish natural gas fleet vehicle policies.
85. Establish one or more large sustainably managed forests for firewood extraction.
86. Establish additional hydroelectric generation opportunities on the Otonabee River.
87. Feature local energy success stories in the local media.
88. Develop curriculum units a wide variety of grade levels and subject areas.
89. Local business trade newsletters should regularly feature practical energy efficiency opportunities and contacts.

Waste Management

90. Develop local municipal building bylaws to facilitate waste recycling and reduction opportunities.

PETERBOROUGH

91. Enact mandatory source separation bylaws with corresponding landfill bans and waste definitions.
92. Gradually introduce user-pay pricing in waste disposal systems.
93. Establish public strategies and targets for waste planning to ensure that day-to-day waste management programs live up to standards set in broader waste management planning.
94. Undertake demonstration waste appraisals or audits.
95. Develop comprehensive waste management information materials.
96. Research basic waste management information.
97. Lobby the provincial government to implement waste reduction initiatives that are beyond municipal jurisdictions.
98. Establish a Peterborough Waste Reduction office.
99. Organize a Peterborough junk mail reduction program.
100. Establish recycling bins in public and quasi-public places such as parks, city streets and shopping malls.
101. Expand recycling to include all feasible materials.
102. Set aside an area in all landfill sites as a "permanent garage sale" for materials such as scrap wood, furniture, household items, construction materials, etc.
103. Establish dedicated storage cells in landfill sites to deal with recyclable materials for which there is, as yet, no market.
104. Establish a community or area storage site and collection service for household and small industry hazardous wastes.
105. Undertake comprehensive waste audits or appraisals as demonstration projects in several different highly visible local businesses and institutional operations.
106. Establish an industrial-commercial-institutional waste appraisal service to provide ongoing support for ICI waste management initiatives.
107. Initiate ICI waste reduction and recycling peer training workshops.
108. Hold an environmental trade fair.
109. Develop a community business-institution information network to provide up-to-date waste management and procurement information.
110. Allow or encourage neighbourhood composting in naturalized parks and community gardens.
111. Adopt procurement policies that favour secondary (recycled), reusable, non-toxic and low-waste materials and hold sectoral procurement workshops for institutional and industrial purchasing officers that highlight these types of products.
112. Develop an institutional information network to facilitate environmentally friendly procurement initiatives.

PROBLEMS/SUCCESSIONS:

The Task Force worked extremely well. It pulled in groups not previously involved in the activities of the Sustainable Development Committee. A number of the recommendations of the Task Force have already been adopted by relevant jurisdictions or agencies and the Sustainable Development Committee is investigating ways to ensure implementation of others.

DOCUMENTATION:

Task Force on Sustainable Development for the Peterborough Area (1991) **Report on the Task Force on Sustainable Development for the Peterborough Area.**

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Household "User Pay" System for Domestic Garbage

CURRENT STATUS:

Conceptual design

COUNCIL APPROVAL:

Approved in principle, 1991

ADMINISTERED BY:

Utility Services Department

ORIGIN/MOTIVATION:

Waste management expenses for the City have risen drastically in the last few years. The design and implementing of alternatives to landfill, improving the technology to ensure a safer landfill site, preparing for a joint Provincial Environmental Assessment Board hearing to consider the expansion of the current landfill site, and the City's share of an on-going search for a new landfill site cost the City \$4,679,500 in 1990. It is estimated that a further \$6,765,000 will be required to finance these activities in 1991. In order to raise the necessary funds to finance the cost of these projects, the City introduced a tipping fee of \$50.00 per tonne in 1989, which has since been increased to \$150.00 per tonne. With current landfill tonnages and the existing tipping fee for commercial and industrial waste, a further \$852,000 in revenue will be needed from other sources to meet expected costs. In 1990, \$561,500 of the total waste management costs were financed by the residential taxpayer through the traditional form of the mill rate. City staff suggested that Council request staff to review the potential for an alternative form of obtaining residential taxpayer contributions.

CONTACT PERSON:

Ivan L. Bateman, Solid Waste Coordinator, Utility Services Department, City of Peterborough, 500 George St. North, Peterborough, Ontario, K9H 3R9, (519) 748-8885.

DESCRIPTION:

Some of the issues being investigated by staff include the following:

1. the potential of collecting one free bag per household;
2. the imposition of an increasing rate per bag collected, presumably to the current maximum of four bags;
3. the development of a system of selling bags, tags or stickers;
4. the development of a public information system to educate the public about the proposal.

PROBLEMS/SUCSESSES:

The City does not have the authority under the Ontario Municipal Act to impose a user fee for waste collection and is petitioning the Provincial Government to allow for implementation of such a system. The main advantage of a user pay system is that the households producing the most garbage will be required to finance a larger share of the disposal of that garbage, and a direct relationship between the amount of garbage produced and the amount paid should encourage the pursuit of individual recycling and diversion opportunities. The major disadvantage of the proposal is that it is far more difficult to impose from an administrative standpoint than the raising of taxes, and it will also take time for a system to be developed and the necessary changes to be made by the Provincial Government to the Municipal Act.

DOCUMENTATION:

Report from the City Administrator to the Committee of the Whole - General, January 15, 1991, **Waste Management Issues.**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:**1.1 Utility Services Department****CONTACT PERSON:**

Barry J. Poulton, Director, Utility Services Department, City of Peterborough, 500 George Street North, Peterborough, Ontario, K9H 3R9, (705) 742-7771.

DEFINITION OF SUD:

Sustainability does not necessarily have anything to do with development. Sustainability implies activities which are not detrimental to the environment and which replace anything withdrawn.

INITIATIVES:

1. Compliance with the requirements of the provincial Environmental Assessment Act (implementation since 1987)

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Department of Engineering and Works

CONTACT PERSON:

David G. Curry, Commissioner of Engineering and Works, City of Ottawa, 1600 Scott St., Ottawa, Ontario, K1Y 4N7 (613) 564-4417

DEFINITION OF SUD:

SUD definitions are too narrow because they concentrate on building developments. For example, recycling activities are not necessarily associated with new building developments or growth. The concept of a conservation strategy is broader and includes environmental protection, environmental enhancement, and restoration.

INITIATIVES:

1. Waste reduction and recycling (implementation)
2. **CFC Policy (implementation)**
3. **CO2 Policy (conceptual design)**
4. **Open space and park naturalization program (conceptual design)**
5. **Environmental survey (audit) (implementation)**
6. **Underground storage tank program (implementation)**
7. **Energy conservation program (implementation)**
8. Stoop and Scoop program (implementation)
9. **Pesticide reduction program (on hold)**
10. **Establishment of Environmental Services Unit (implementation)**
11. Storm water retention ponds (implementation)
12. Combined sewer separation program (implementation)
13. **Beach clean-up program (implementation)**
14. **Hazardous Industrial Land survey (implementation)**
15. **Urban environmental conservation strategy (conceptual design)**
16. Asbestos removal program in city buildings (completed)
17. Methane recovery at closed landfill (implementation)
18. **Experiments with road salt alternatives (completed)**
19. **Urban forestry program (implementation)**

COMMENTS:

A key thrust in future environmental protection activities should be to treat the source of a problem rather than its consequences. A good example of the benefits of the former approach and the pitfalls of the latter approach occurred during clean-up activities for a public beach at Britannia Bay. This beach lies just downstream of a sewage outflow pipe from an adjacent municipality. In an attempt to reduce pollution levels at the beach, a breakwater was constructed that directed outflow water into the middle of the river. It was

discovered later that rather than alleviating the pollution problem, this solution may have aggravated it. The breakwater restricted the flow of water through the shallow waters fronting onto the beach and thus restricted the dispersal of pollutants from other sources. The City is now investigating other potential causes of the pollution problem. Contributing factors may include the large number of seagulls in the area, broken sewers on land, or other land-based pollution sources. In other words, solutions are being investigated which attempt to reduce pollution at source rather than focusing on "end-of-pipe" solutions which treat the pollutants once they have been generated. They also focus on the total environment as opposed to one particular element of it.

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ORGANIZATIONAL UNIT:

1.2 Department of Planning and Development

CONTACT PERSON:

Ted Robinson, Commissioner of Planning and Development, City Hall, 111 Sussex Dr., Ottawa, K1N 5A1 (613) 564-3004

SUD DEFINITION:

Referred to following mission statement in new Official Plan:

City Council accepts that change is an on-going phenomenon in cities which must be managed within the parameters imposed by the overriding aim of preserving a lasting habitat for humanity and wildlife. It also recognizes that economic prosperity can provide us with the capability to support wise resource management, to meet social needs and to improve environmental quality. Therefore, City Council supports an approach to managing urban development which balances the rights of the individual and the needs of society with the need to conserve our natural resource base and enhance the natural environment, thereby promoting the health of Ottawa's inhabitants and communities [City of Ottawa Official Plan: A Vision for Ottawa, September 1989, p.2].

INITIATIVES:

1. **Environmental comments on site plans, area plans, and rezoning applications (implementation)**
2. **Sustainable Development component to new Official Plan (conceptual design - final draft released)**

PROBLEMS/SUCCESES:

A problem with current initiatives is that the community is still grappling with how far it should go in dealing with environmental concerns. Environment is not the only factor that should be considered in urban development. There are other pressures in play as well. It is not really clear whether environmental groups are pro-environment or simply anti-change. The community will have to consider the tradeoffs among different issues at some point in the near future. For example, what is the importance of preserving seasonal

wetlands relative to other concerns such as low-cost housing? Right now, everyone is formulating and concentrating on environmental issues. It seems as though every environmental issue is the most important one. An incremental approach to including environmental concerns may be better than one which we find ourselves in now, where we are trying to do everything at once.

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ORGANIZATIONAL UNIT:

1.3 Department of Economic Development

CONTACT PERSON:

James L. Sevigny, Commissioner of Economic Development, City Hall, 111 Sussex Drive, Ottawa, K1N 5A1, (613) 564-1130

SUD DEFINITION:

SUD means a level of development that infrastructure and resources are capable of supporting without causing a deterioration in the quality of life. SUD is also a level of growth capable of maintaining a viable urban economy.

INITIATIVES:

1. Industrial land strategy
2. Office site accommodation policy

PROBLEMS/SUCSESSES:

One concern is that there should be greater coordination on economic development activities between the Regional Government and the City of Ottawa. A second concern is the lack of new development opportunities in the Central Area identified in the revisions to the Official Plan.



DOCUMENTATION:

Department of Economic Development (1989) **Office Site Acquisition and Development - A 1990 Corporate Policy**, Memorandum to Economic Affairs Committee, Oct. 18, 1989. Department of Economic Development (1988) **Industrial Development Strategy**, Memorandum to Economic Affairs Committee, Oct. 14, 1988.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

2.1 Environmental Management Branch

DATE ESTABLISHED:

1990

BUDGET:

\$300,000

STAFF:

5

REPORTS TO:

Commissioner of Engineering and Works

CONTACT PERSON:

Paul McDonald, Coordinator of Environmental Services, Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-4417.

DESCRIPTION:

The Coordinator of Environmental Services is responsible for coordination of the planning, organizing and controlling of the Department's responsibilities for Environmental Protection. The main duties of the coordinator include the following:

1. familiarity with the various environmental protection initiatives for which the Department is currently responsible;
2. responsibility for identifying initiatives in the Department's Environmental Protection Work Plan that are currently not being addressed and making recommendations for action plans to address those initiatives;
3. responsibility for environmental protection issues that do not currently fall within any Branch responsibility within the Department;
4. responsibility for the monitoring of provincial and federal government legislation guidelines and initiatives, identifying opportunities for increased environmental protection and making recommendations for action;
5. responsibility for coordinating (within City of Ottawa boundaries) the Department's responsibilities with respect to the implementation of federal and provincial environmental legislation and approved environmental protection strategies, and for acting as a watchdog for compliance with these;
6. responsibility for providing coordination between the Branches of the Department of Engineering and Works and other Departments on environmental protection issues, and chairing (as required) inter-Departmental meetings or task forces on environmental protection;
7. responsibility for directing and conducting studies and investigations, evaluating environmental control measures, and performing environmental assessments;
8. representing the City by speaking to community associations, professional/industrial groups, University and Community Colleges on environmental matters.

INITIATIVES:

1. **Environmental Conservation and Management Strategy (conceptual design).**
2. Environmental Inventory of City Lands (conceptual design - a methodology to evaluate and prioritize lands that may have environmental value has been developed).
3. State of the Environmental Reporting (conceptual design).

- 4. Municipal Environmental Evaluation Process (conceptual design).
- 5. Environmental Inventory of City Activities (implementation).

PROBLEMS/SUCCESES:

There has been a great deal of cooperation and support for the initiative among city departments to date. One problem encountered relates to the difficulty of determining the appropriateness of a home department for an environmental services unit. Since overlap exists in the delivery of programs between departments and since environmental issues can arise in all departments, there is a danger that environmental recommendations coming from one department may be interpreted by other departments as an invasion of their territory.

COMMENTS:

The staff in Environmental Services consists of a coordinator from Engineering and Works, and staff secondments from Planning and Development, Recreation and Culture, and Housing and Property.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 City of Ottawa - Boards of Education Joint Task Force on Environmental Concerns

REPORTS TO:
City Council and School Boards

DATE ESTABLISHED:
1988

CONTACT PERSON:
Alison Rothschild, Waste Management Coordinator, Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-1119

ORIGIN/MOTIVATION:
The Boards of Education approached the City with the idea. The motivation for the Task Force was the potential to coordinate environmental purchasing policies and thus increase joint purchasing power.

MEMBERSHIP:
2 aldermen, School Board members, City staff, School Board staff, 1 representative from the Environmental Advisory Committee.

FUNCTION/GOALS:

To develop joint purchasing policies and to coordinate actions on other environmental issues of mutual concern. The Task Force has three sub-committees: Public Education, Procurement Policy, and Waste Management.

INITIATIVES:

In addition to coordinating purchasing policies, another important initiative of the Task Force was a public education campaign during Environment Week which included the publication of a list of 101 ways in which members of the public can help the environment.

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ORGANIZATIONAL UNIT:

3.2 Environmental Advisory Committee

DATE ESTABLISHED:

1979

BUDGET:

\$600 for member and meeting expenses. Requesting \$14,800 for 1992.

STAFF:

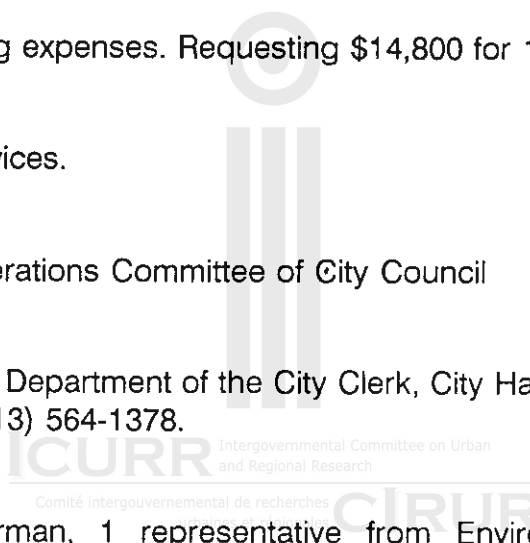
1 part-time for secretarial services.

REPORTS TO:

Community Services and Operations Committee of City Council

CONTACT PERSON:

Patricia Korchinski, Secretary, Department of the City Clerk, City Hall, 111 Sussex Drive, Ottawa, Ontario, K1N 5A1, (613) 564-1378.



MEMBERSHIP:

8 citizen members, 1 alderman, 1 representative from Environment Canada, 1 representative from Ontario Ministry of Environment.

FUNCTION/GOALS:

1. Advises on the effectiveness of current City policies and programs directed to the preservation of the quality of the natural environment and advises on new policies suitable for protection and enhancement of the natural environment.
2. Reports on the state of the natural environment.
3. Advises on private and governmental programs affecting the natural environment in Ottawa.
4. May hold public hearings and undertake research on issues of importance.

INITIATIVES:

The following is a selected list of recent Committee initiatives and, unless otherwise specified, all of them have been implemented:

1. Recommendation for a pesticide-free zone in the City.
2. Researched styrofoam versus paper cups issue.
3. Commented on environmental policies in revisions to the City's Official Plan.
4. Created an environmental award system (conceptual design).
5. Review of site plan and rezoning applications (to start 1992).

COMMENTS:

The Chief Administrative Officer for Ottawa is currently conducting a review of all of the City's advisory committees. He has recommended that the Environmental Advisory Committee report to the Department of Engineering and Works rather than directly to a committee of Council.

DOCUMENTATION:

Department of City Clerk Procedures Manual (1989) **Environmental Advisory Committee Authority, Terms of Reference, etc.**

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4. SELECTED INITIATIVES

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INITIATIVE:

CURRENT STATUS:

4.1 Experiments with road salt alternatives

Completed, 1988

ADMINISTERED BY:

Department of Engineering and Works Intergovernmental Committee on Urban and Regional Research

ORIGIN/MOTIVATION:

The City has been investigating the issue for a number of years. Two of the concerns about salt application are its cost and the damage it causes to trees and green areas. The City, along with other municipal jurisdictions in the area, is also involved in a court case over damage caused to a large private parking garage by road salt.

CONTACT PERSON:

George Assaff, Operations Engineer, Department of Engineering and Works, 1600 Scott Street, Ottawa, Ontario, K1Y 4N7, (613) 564-1142

DESCRIPTION:

The City conducted a series of experiments in which they tested salt (sodium chloride) against sodium formate and calcium magnesium acetate (CMA). Sodium formate and CMA do not promote corrosion and are less toxic than salt. Although CMA is largely environmentally benign, sodium formate can have potential negative impacts on water quality, soil structure, and vegetation. Both alternatives were found to work well, but the materials were expensive. Sodium chloride costs \$36/tonne while sodium formate costs \$600/tonne and CMA costs \$780/tonne.

PROBLEMS/SUCCESSSES:

The city has not yet switched to either of the two alternatives because of the high cost. Some of the environmental benefits, such as reduced damage to lawns, boulevards, and urban trees were found impossible to quantify. It was also difficult to quantify the benefits from corrosion damage reduction for cars, parking garages, and bridges. For example, even if the city uses the alternatives, the environmental benefits would not be completely realized because of "tracking" from adjacent municipalities who are still using salt. The city has been experimenting with a number of other methods for reducing salt use. These include: increased plowing, pre-melting of salt, and using different de-icing mixtures.

DOCUMENTATION:

Sypher-Mueller International Inc. and TES Ltd. (1988) **1987-88 City of Ottawa De-Icer Field Trials**, Report prepared for Department of Engineering and Works, City of Ottawa.
 Sypher-Mueller International Inc. and TES Ltd. (1987) **Alternatives to Sodium Chloride as a Snow and Ice Control Agent for Use on City of Ottawa Collector Roads**, Report prepared for Department of Engineering and Works, City of Ottawa.

INITIATIVE:

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4.2 Environmental comments on site plan, area plan and by-law revisions
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CURRENT STATUS:

Implemented since 1990

ADMINISTERED BY:

Site Plan and Decision Division, Department of Planning and Development

STAFF:

Existing staff have incorporated the procedure as part of their current work activities. The job description for an opening at the intermediate planner level in the land development branch has been modified to request environmental experience.

ORIGIN/MOTIVATION:

The motivation for this initiative arose from a site plan application for a site that was 75% heavily wooded and sloped. Both the general public and council members expressed concern that this was not a suitable site for development from an environmental point-of-view. Council had approved the zoning for the site one year previously, but because there were no environmental comments on the zoning application at that time, Council had not been aware that there was a potential problem. This experience prompted Council to request environmental comments on all future zoning, area plan and site plan applications.

CONTACT PERSON:

Ann Ernesaks, Manager, Site Plan and Design Division, Department of Planning and Development, City Hall, 111 Sussex Drive, Ottawa, K1N 5A1, (613) 564-3047

DESCRIPTION:

There are no specific guidelines for the content of the environmental comments, but they generally note the existing natural vegetation, the impact of development on vegetation and the natural environment (e.g. loss of trees), what adjustments have been made in the design of the development to protect the environment and what kinds of replacement materials are being used. If particular areas of concern are identified during the review, then negotiations may be initiated to ask the developer to modify the application. It is anticipated that a "checklist" for this type of review may be developed once the Official Plan has been finalized.

PROBLEMS/SUCCESSSES:

This approach is still in its infancy and it is too early to make definitive statements about its successes or problems. However, there are already instances of plans having been deferred because of concern over destruction of existing vegetation. One problem discovered to date is that it makes the application process more difficult for small developers because of their unfamiliarity with the new initiative and because no specific criteria have been established for the environmental review. Experience so far seems to indicate that the best level to achieve successful negotiations for environmental protection is at the development plan stage where guidelines can be provided for individual parcels.

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INITIATIVE:

4.3 Sustainable development component in new Official Plan

CURRENT STATUS:

Final draft approved by City Council on July 3, 1991

ADMINISTERED BY:

Department of Planning and Development

ORIGIN/MOTIVATION:

The City's existing Official Plan was approved in 1953. The decision to undertake the review of the Official Plan was made largely in response to the fact that the Plan had not been comprehensively updated for a period of 35 years. As a result, the City did not have an approved position on the desired future of the City, nor a consistent city-wide policy basis to guide area/site specific development proposals. With a new Official Plan in place, the development industry and the community will have a clearer sense of where the City is headed. This will create certainty for the community and will facilitate investment where development opportunity has been established. The City will also be better equipped to carry out secondary planning in areas of need and to facilitate consistent secondary planning on large development sites.

CONTACT PERSON:

E.R. Fobert, Manager, Policy Planning and Research, Department of Planning and Development, City Hall, 111 Sussex Drive, Ottawa, Ontario, K1N 5A1, (613) 564-3532

DESCRIPTION:

The City of Ottawa's Official Plan Review Process began in 1985. A preliminary draft of the plan was released in September, 1989, and the final draft was released in February, 1991. The final draft of the Official Plan opens with a Mission Statement that enshrines the concept of Sustainable Urban Development:

City Council accepts that change is an on-going phenomenon in cities which must be managed within the parameters imposed by the overriding aim of preserving a lasting habitat for humanity and wildlife within a sound and balanced corporate fiscal framework. It also recognizes that preservation and restoration of the environment and careful stewardship of finite resources will contribute to an economic and social quality of life. Therefore, City Council supports an approach to managing urban development which balances the rights of the individual and the needs of society with the need to conserve our natural resource base and enhance the natural environment, thereby promoting the health of Ottawa's inhabitants and communities.

The following 16 guiding principles provide the philosophical underpinning for the plan:

1. the adoption of Sustainable Urban Development as the basis upon which the City will manage the future;
2. more physically concentrated communities and energy efficient land use patterns;
3. sensitive management of its natural setting;
4. a strong and diverse economy that integrates environmental and economic goals;
5. managed growth in light of limits to infrastructure and the achievement of a healthy and livable urban environment;
6. neighbourhoods as building blocks of the City;
7. decreased reliance on the car;
8. secure, adequate and affordable housing in all neighbourhoods;

9. a safe human and physical environment;
10. freedom of choice and influence over change;
11. new development that is people-oriented, reflects a human scale of development and has a pedestrian orientation;
12. barrier free access;
13. protection of the City's heritage resources;
14. improvements in aesthetics and livability through application of urban design principles and guidelines to the development control process;
15. an anticipatory and preventative approach to managing change; and
16. a commitment to public involvement in decision making.

Some of the policies in the plan related to achieving sustainable urban development are highlighted below.

The Greenway System. The plan establishes a limited development designation, known as the Greenway System, consisting of those areas designated as Waterway Corridors, Environmentally Sensitive Areas, Linkages, Agricultural Areas and Major Open Space. It is the aim of the plan to secure, maintain and expand the linear pattern of the Greenway System to provide a continuous network of lands and related waters that connect all parts of the City. Permitted uses in Waterway Corridors include leisure activities, preferably pathway systems, and water-oriented activities and uses, such as boating and beach facilities and selected transportation corridors. The only permitted activities in Environmentally Sensitive Areas are those which are compatible (e.g. nature appreciation, sensitively designed/located pathways) with the protection and conservation of the unique natural features. Linkages are selective corridors for transportation, utilities and leisure resources. All development permitted within the Greenway System must:

1. be located to minimize the loss or degradation of wildlife habitat, wetlands and the urban forest;
2. minimize the amount of hard surfaces associated with the development;
3. naturalize or otherwise reinforce existing vegetation and urban forest on lands surrounding development;
4. utilize designs which protect wildlife corridors and habitats, prevent reductions in groundwater levels, avoid negative impacts upon waterways, respect unique geological and geographical features, minimize erosion or degradation of soils, and communicate a sense of place and harmony with the natural environment.

The extension and enhancement of the Greenway System shall be pursued through acquisition, land exchange, long-term lease, easement agreements, placing conditions on development approvals, land trusts or other means. The designation of areas within the Greenway System does not infer a commitment to purchase such areas, nor is it implied that such areas under private ownership are free and open to public use. A land stewardship program shall be instituted, in cooperation with affected agencies and owners, to conserve the Greenway System.

Environmental Constraint Areas/Sites include areas affected by airport-related noise, flood plains, Areas of Natural and Scientific Interest (ANSI), unstable slopes, sites with potential soil contamination, and abandoned pit and quarry sites. Development in the latter four areas will only be permitted after submission and approval of a Municipal Environmental Evaluation Report (MEER). The applicable Land Use designation determines the permitted activities on ANSIs, provided that the features of interest remain intact for interpretative purposes and public access is provided.

Municipal Environmental Evaluation. Municipal Environmental Evaluation Reports (MEER's) shall be required for assessing development proposals within the Greenway System plus ANSIs, contaminated sites, unstable slopes, existing pits and quarries, waste management facilities and snow disposal sites. A MEER may also be required for other development proposals which have the potential to adversely affect the environment and/or the health and safety of citizens. In this regard, a screening process shall be established and applied to all developments that are subject to secondary planning, including zoning, official plan, subdivision, condominium or site plan approval processes, as the basis for determining the need for a MEER. Evaluation of the MEER shall take place as part of the established approval procedure for development applications and shall not be the subject of an independent decision making process. Until City Council has prepared and approved detailed instructions to guide the preparation of MEERs, the MEER must include the following:

1. a description of the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly;
2. the effects that will be caused or that might reasonably be expected to be caused to the environment; and
3. the actions necessary to prevent, change, mitigate or remedy and monitor the effects upon or the effects that might reasonably be expected upon the environment, by the proposed development.

Proposals for new development or expansions to existing development within Traditional Industrial Areas shall not be permitted if they are considered to represent a significant health or safety risk to City residents or the environment by reason of noise pollution or pollution of the environment, or by virtue of any other adverse environmental impact. Where there is some question as to the impact such a use or development may have on the environment, the City shall require submission of a MEER. A MEER shall not be required where an undertaking is already subject to federal or provincial environmental assessments, provided such assessments satisfactorily address those environmental matters of municipal interest.

Energy Conservation. Energy conservation shall be supported by requiring, where feasible, in areas which are not substantially developed, good opportunity for south-facing and solar collectors by: orienting streets within 30 degrees of east-west and collector streets within 30 degrees of north-south or east-west wherever possible; orienting lots for single and semi-detached dwelling units within 30 degrees of north-south wherever possible; and locating blocks of land intended for buildings taller than four stories to minimize shading of low profile residential areas.

Air Quality. The City intends to promote the establishment, along with the Federal Government, of a monitoring and regulatory system to control tail pipe emissions in the region. The City will provide a leadership role in the reduction of carbon emissions by examining the potential to implement a significant reduction in the use of fossil fuels for City vehicles and by encouraging commuting alternatives for City employees, including flexible working hours, home-based computer networking or compensation for use of non-auto trips for City business.

Water Quality. Master drainage plans may be required prior to approval of an official plan amendment affecting a large tract of undeveloped land. Storm water design plans shall be required as the basis to evaluate plans of subdivision, condominium and site plans. Where no such plan exists, the City shall require the proponent of such developments to provide the following:

1. proposals for the provision of storm water drainage, including the cost of storm water drainage improvements both on-site and down stream;
2. a determination of the impact of the development on the receiving water course or storm water management facility, both during and after construction, with regards to flooding, pollution, erosion and sedimentation; and
3. proposals and/or design details for mitigating any adverse impacts if such are likely to result from the proposed development.

The Urban Forest. The conservation and enhancement of the existing urban forest, wherever possible, shall be required as a condition of development and planning approval. Where not possible, the loss of urban forest shall be offset by requiring the reinstatement of an appropriate quantity and quality of urban forest on the site of the development and/or the placement of removed trees in a City Tree Bank for transplanting elsewhere in the City. The urban forest inventory on road rights-of-way shall be maintained and increased, in cooperation with the Regional Municipality of Ottawa-Carleton, by: requiring that, for every tree that is removed from road rights-of-way, a replacement tree is provided, where possible in the same location as the tree removed; requiring, at the time of site plan approval, that planting on private property complements and supplements road rights-of-way planting; maximizing tree planting through site plan approvals, subdivision agreements and through streetscaping programs. A minimum amount (e.g. 5%) of the total capital budget funded by the City for major public works shall be devoted to tree planting. Criteria shall be established for the eventual designation of woodlands throughout the City and strategies shall be developed for their conservation and enhancement.

Reduced Reliance on the Car shall be encouraged by giving increased priority to the maintenance and improvement of all other modes of transportation over the needs of private automobiles and by supporting the construction of new roads or the expansion of existing roads only when all feasible non-automobile alternatives have been analyzed. The City intends to promote ride sharing, support park-and-ride facilities for automobiles and cycles, provide parking incentives in City operated parking facilities that favour high occupancy vehicles, and increase commuting by pedestrians and cyclists through the preparation and implementation of a Comprehensive Cycling Plan and a Comprehensive Pedestrian/Walking System Plan. The City shall establish parking rates in City-owned

facilities which discourage long-term parking. All developments shall be required to have cycle parking and will be encouraged to have change rooms and showers. The number of convenient and secure parking facilities for cycles shall be increased. Parking requirements for developments may be reduced for the employment and retail components of mixed use development where sharing of parking facilities is possible; where transit service is on-site, adjacent to or can be incorporated into a development; or where there is or can be expected to be a high volume of travel by non-motorized vehicles. The design of primary and secondary employment centres should be compact and provide an attractive pedestrian-oriented environment which facilitates the achievement of a high modal split and access via public transit.

Affordable Housing. A minimum of 25% of the total units in major development projects (200+ units) must be affordable housing and 20% of the total units should be targeted for social housing. A minimum of 25% of the aggregate total of new annual residential construction across the City should be targeted as affordable housing and achievement of the target will be monitored on an annual basis.

PROBLEMS/SUCSESSES:

The most important lesson arising from this exercise is that it is essential to undertake Official Plan reviews on a regular basis rather than every 35 years. In Ottawa, this review gap has meant that massive changes are needed in the updated plan rather than incremental changes and that the planning process is much lengthier than it would otherwise have to be. It is helpful to have a Steering Committee of community activists to assist in providing a clearer view of the community's values. This Steering Committee can perhaps alleviate the problem that it is often difficult to focus public involvement until a draft Official Plan document exists. It is not a good idea to attempt to rush the public involvement process.

Some of the key successes of this planning process have been the high level of public involvement and consciousness raising. Many of the ideas raised during the process are already influencing the City's current practices, such as in the review of development applications against environmental criteria. An important difference between this Official Plan and previous ones is that it is based more on a broad qualitative statement of the future rather than an evaluation of different strategies. Environment is seen not as a constraining factor but rather as a guiding principle. At the same time, it is apparent that the Official Plan cannot address all of the concerns identified during the public input process and that an Urban Conservation Strategy may be a better tool for achieving certain objectives.

One of the problems encountered in developing the Official Plan was that community values and views on the environment were changing fairly rapidly during this development stage. For example, the concept of sustainable development was not yet popular in 1985 when the planning process started and there were very few comments raised on the directions being taken in early issue papers and discussion papers. However, the concept became highly visible with the release of the Brundtland report on "Our Common Future" in 1987 and community networks began to start organizing and awakening to the implications of the Official Plan for the environment. Although the preliminary draft plan, when it was released in 1989, incorporated the concept of sustainable development, about four-fifths of the comments received during the public review called for the plan to pay more attention to environmental concerns. The final draft plan incorporates a number of significant changes in this area. A problem that arose in addressing these concerns was the constraints imposed on municipal powers by Ontario legislation and the lack of a legislative mandate to protect the environment. Its current powers permit the city some measure of control over environmental matters through its site plan approval process and associated negotiations with developers (See previous entry on "Environmental Comments").

DOCUMENTATION:

City of Ottawa (1991) **City of Ottawa Official Plan, "A Vision for Ottawa", Volume 1: The Primary Plan, Final Draft - February, 1991.**
 Community Planning, Department of Planning and Development (1991) **Adoption of the City of Ottawa Official Plan, Department Report.**

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INITIATIVE:	CURRENT STATUS:
4.4 Environmental Conservation and Management Strategy	Conceptual design



ORIGIN/MOTIVATION:

The idea for an Environmental Conservation and Management Strategy originated during the review process of the Official Plan when it became apparent that some of the environmental concerns of the community might be more appropriately dealt with by another instrument. The Official Plan states that City Council shall prepare and implement, as a priority, a comprehensive Urban Environmental Conservation Strategy as the means to address environmental issues affecting Ottawa. The Official Plan will be one of several policy documents that will ultimately support the Strategy.

CONTACT PERSON:

Paul McDonald, Coordinator of Environmental Services, Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-4417.

DESCRIPTION:

The goal of the Strategy is not the management of the environment but rather the management of human activity affecting the environment, with an initial focus on the biophysical environment.

The Strategy's guiding principles rely on the adoption of an ecosystems approach and the following sustainable development principles:

1. Integration of environmental considerations in all decisions. The interrelationship between the biophysical, social and economic components of the environment has to be a forethought not an afterthought; aims for a gain in environmental quality by compensating for losses elsewhere in the system.
2. Stewardship, which implies managing the environment for the benefit of present and future generations.
3. Prevention, which implies anticipation and prevention or minimization of environmental damage from occurring; includes systematic monitoring.
4. Conservation, which implies maintenance of essential ecological processes, biological diversity and life-support systems of the environment; makes wise and efficient use of renewable and non-renewable resources.
5. Rehabilitation and reclamation, which implies the restoration or improvement of damaged or degraded environments.
6. Equity and access, which implies expansion of opportunities for the disadvantaged today and an inheritance of human capital and natural wealth for future generations that is at least as valuable as the ones currently in existence. It means the equitable distribution of benefits and costs of resource use and environmental management.
7. Social responsibility for sustainability, which implies the promotion and support of values compatible with sustainability and recognizes/enhances collective and community consciousness of sustainability.

The Strategy will be implemented through six basic programs:

1. State of the environment reporting to collect information on the whole urban ecosystem including the biophysical, social and economic components and the interactions among them.
2. Municipal environmental evaluation for all land use planning and development activity within the City including both City works and non-City works.
3. Protection, conservation and rehabilitation, focusing on policy development, legislation, training and education as well as specific projects.
4. Research and development for issues and legislation that may affect the City's environmental quality.
5. The community and City in partnership, to include public meetings for public comment on the Strategy; small workshops with community and interest groups to consult on scope, programs, policies and priorities; and round tables to bring together business and government representatives to clarify issues and direction.
6. Education and awareness aimed at City residents and staff.

The Strategy has already had input from the City's Environmental Advisory Committee, the City of Toronto, the Ontario Round Table on Environment and Economy, and Environment Canada's Sustainable Development Branch. A public meeting has been scheduled to receive comments from the general public. The next stage in the development of the strategy is to prioritize the areas of concern. Submission to Council is expected during the summer, 1991.

DOCUMENTATION:

City of Ottawa Department of Engineering and Works (1991) **The Environmental Conservation and Management Strategy: The City of Ottawa's Approach to Environmental Management**, p.27.

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INITIATIVE:

4.5 Environmental survey (audit)

CURRENT STATUS:

Completed, 1990

ADMINISTERED BY:

Buildings and Equipment Branch, Dept. of Eng. And Works

ORIGIN/MOTIVATION:

Commissioner of Engineering and Works requested the audit. Concern over the issue of environmental liability.

CONTACT PERSON:

James Mouland, Director of Building and Supply, Department of Engineering and Works, 7 Bayview Rd., Ottawa, Ontario, K1Y 2C5, (613) 564-1905

DESCRIPTION:

The audit consisted of a full inspection of all the material and storage facilities belonging to the Engineering and Works Department. The objective of the inspection was to identify any potential environmental hazards and to recommend any remedial measures that might be required. The following facilities and materials were inspected: underground and above-ground oil tanks, garbage bins, drum storage, vehicles, sewage lift stations, oil interceptor boom, designated substances (asbestos, lead, silica, acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, mercury, vinyl chloride), PCB's, arenas, swimming pools and wading pools, air conditioning and refrigerators, fire extinguishing systems, boiler treatment chemicals, cooking oils, antifreeze, tires, and propane.

DOCUMENTATION:

City of Ottawa, Department of Engineering and Works, Buildings and Equipment Branch (1990) **Environmental Survey, Corporation of the City of Ottawa.**

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INITIATIVE:
4.6 Hazardous industrial land survey

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CURRENT STATUS:
Completed, 1988

ADMINISTERED BY:

Department of Engineering and Works

ORIGIN/MOTIVATION:

Underground pockets of coal tar were discovered during the construction of Ottawa's urban transitway. This discovery received a great deal of publicity and the City decided to undertake the study in order to reduce the possibility of encountering such problems in the future.

CONTACT PERSON:

Tony Garnett, Director of Operations for the Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-1119.

DESCRIPTION:

The purpose of this study was to identify and map former industrial sites active in the city between 1850 and 1984 and to assess the potential environmental impacts or problems that may exist at these former sites as a result of past practices. One hundred and seventy-seven former industrial sites were identified in the study and categorized into three hazard groups. One hundred and fifty-four of the sites were classified as Group III sites, which are sites where it is unlikely that significant quantities of waste exist at the sites today. Eighteen sites were listed in Group II as having sufficient evidence to indicate that wastes are on the site but that exposure at the present time is unlikely. Five sites were classified as Group I. Group I sites are those where there is sufficient evidence to indicate that wastes are present on the site and that there is a high potential for environmental impact.

PROBLEMS/SUCCESSSES:

The report noted that the inventory may not be complete because of inadequacies in the historical record. In addition, the potential for environmental impacts at many of the sites would have to be confirmed by means of sub-surface investigations. Property owners who wish to have a designation removed from their property must obtain a Ministry of Environment review of their clean-up operation. Since the Ministry of Environment has no certification program for the approval of formerly contaminated lands, the city makes its own decision as to whether the clean-up has been satisfactory. Some owners have already initiated programs. This program has worked well although there were some objections by landowners over their classifications. One factor contributing to its success may be that there was very little publicity in the press about the locations of sites which were identified and their classifications.

DOCUMENTATION:

Intera Technologies Ltd. (1988) **Mapping and Assessment of Former Industrial Sites, City of Ottawa**, Report prepared for City of Ottawa.

INITIATIVE:

4.7 Pesticide reduction program

CURRENT STATUS:

On hold

ADMINISTERED BY:

Department of Engineering and Works

BUDGET:

\$136,000 (over 2 years)

ORIGIN/MOTIVATION:

Environmental Advisory Committee's request that the City of Ottawa be declared a "Pesticide-Free Zone".

CONTACT PERSON:

Tony Garnett, Director of Operations for the Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-1119

DESCRIPTION:

The pesticide reduction report makes the following recommendations:

1. That the City of Ottawa develop an Integrated Pest Management strategy for the maintenance of all Corporation-owned properties and facilities with a view to reducing the use of environmentally-damaging chemical pesticides, and the strategy be implemented over a 2-year period;
2. That a public education campaign be initiated explaining the disadvantages associated with the use of harmful household chemical pesticides and promoting the use of more environmentally-friendly alternatives;
3. That the City of Ottawa urge all other municipalities, businesses, governmental and non-governmental organizations in the Region to join the City of Ottawa in its efforts to reduce the use of environmentally damaging chemical pesticides.

About 85% of the budget request in the report was for staffing and the hiring of a consultant knowledgeable about Integrated Pest Management. The remainder was for a public education campaign and minor capital purchases.

PROBLEMS/SUCSESSES:

One problem with the Environmental Advisory Committee's recommendation was that no enabling legislation existed to allow the City to declare itself a "Pesticide Free Zone". A second problem was that the recommendations in the pesticide reduction report were adopted by City Council in the summer of 1990, but the program has been placed on hold because it was deemed to have a lower priority than other items and dropped from the 1991 budget in the fall of 1990.

COMMENTS:

The city already uses insecticidal soap instead of pesticides and has banned 2-4-D.

DOCUMENTATION:

Department of Engineering and Works Memorandum to Community Services and Operations Committee, City Council, and Policy, Priorities and Budgeting Committee, June 14, 1990, **Reducing Pesticide Use in the City of Ottawa.**

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INITIATIVE:

4.8 Beach clean-up program

CURRENT STATUS:

Approved, 1990

ADMINISTERED BY:

Department of Engineering and Works

ORIGIN/MOTIVATION:

The motivation for this report was the annual closure of city beaches during the summer due to unacceptable pollution levels. The request to investigate the problem came from City Council and the general public.

CONTACT PERSON:

David G. Curry, Commissioner of Engineering and Works, City of Ottawa, 1600 Scott St., Ottawa, Ontario, K1Y 4N7 (613) 564-4417.

DESCRIPTION:

The beach clean-up program consists of several parts dealing with jurisdictional issues, storm water management, staffing, proposed legislation, environmental management charges, and the "total environment" concept. The key recommendations of the beach clean-up report were as follows:

1. Endorse the decision by the Regional Municipality of Ottawa-Carleton to assume responsibility for collecting and analyzing data on the quality of surface water, investigating the impact of bacterial discharges from the municipal infrastructure system, and identifying conceptual remedial measures to be implemented by the local municipalities;
2. Request that the Region examine the total environment affecting beaches by means of a comprehensive investigation of the causes of elevated pollution levels;
3. Develop a gull management program at one of the city's beaches prior to the 1991 swimming season;
4. Investigate the feasibility of a storm water management charge for developers of properties in the watershed of one of the city's rivers;
5. Assess which sites on National Capital Commission Land might be suitable for the development of wetlands to treat storm water;
6. Create a new Engineering and Works staff position with responsibilities in water quality management;

7. Request the Ontario government to implement legislation requiring that records of boat holding tank discharge be maintained and available for inspection.

PROBLEMS/SUCCESSIONS:

This report affirms the resolution of long-standing jurisdictional problems over the management of water quality in the region. It also proposes a new "total environment" approach to the resolution of environmental problems.

DOCUMENTATION:

Department of Engineering and Works Memorandum to Community Services and Operations Committee and City Council, December 5, 1990, **Beach Pollution Clean-up.**

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INITIATIVE:

4.9 CFC Policy

CURRENT STATUS:

Implemented, 1989

ORIGIN/MOTIVATION:

City of Toronto by-law governing the emission of CFCs and Halons

CONTACT PERSON:

Tony Garnett, Director of Operations for the Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-1119.

DESCRIPTION:

The City of Ottawa investigated the possibility of creating a by-law governing the emissions of CFCs and Halons in the city but decided that it would be more appropriate for the Regional Municipality of Ottawa-Carleton to undertake such an initiative. The city did, however, establish a policy for recovering and avoiding the purchase of ozone-depleting substances in its own operations.

PROBLEMS/SUCCESSIONS:

One of the factors affecting the City's decision not to adopt such a by-law was that the legal department could not find enabling legislation to support it. The Region did not adopt the City of Ottawa's recommendation, claiming that the Environmental Protection Act had been amended to permit Regulations for controlling the use of CFCs and a protocol had been established for their reduction and eventual elimination from most applications by July, 1998. The successful adoption of a corporate CFC policy was attributed to the widespread acceptance by society of the need for such a policy.

DOCUMENTATION:

Department of Engineering and Works Memorandum to Community Services and Operations Committee, City Council, and Policy, Priorities and Budgeting Committee, October 10, 1989, **Proposed By-law for Controlling CFC and Halon Emissions**

Department of Engineering and Works (1990) **Details of What the City of Ottawa Can Do in Order to Achieve the Recommendations of the Council Report on CFCs and**

Halons.

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INITIATIVE:
4.10 Urban forestry program**CURRENT STATUS:**
Implementation**ADMINISTERED BY:**
Various departments**ORIGIN/MOTIVATION:**

As a result of concerns raised by the public with respect to the deterioration of the urban forest, the Community Services and Operations Committee recommended creation of a Corporate Task Force on the Urban Forest which was subsequently established in 1988.

CONTACT PERSON:

Tony Garnett, Director of Operations for the Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-1119.

DESCRIPTION:

The Task Force's Final Report lists a number of recommendations, including the following:

1. Develop and maintain a computerized master plant list of urban hardy species for the Ottawa climatic zone and make this list available to all existing and potential users in Ottawa;
2. Continue to develop the existing computerized tree inventory and information system;
3. Review all site plans and subdivision plans which include road allowance planting and verify that required planting takes place and include any newly planted trees on the computerized inventory;
4. Establish a committee of representatives from industry, community associations and the general public to liaise and make recommendations regarding urban forest tree planting and maintenance specifications and methods;
5. Amend City by-laws to reflect tree values as determined by the Ontario Shade Tree Guide and use when charging owners for the removal of trees;
6. Develop a public awareness campaign, including the use of semi-annual newspaper ads to educate the public about the environmental value of trees;
7. Encourage the composting of leaves by individual city residents and expand the City Leaf Composting Program;
8. Make information available to landscape designers and maintenance staff on tree species' tolerance to road salt and road salt alternatives;
9. Minimize snow and ice control damage to trees by altering operational techniques, plant locations, species planted, protection systems utilized, etc.;

10. Include a clause in all relevant agreements (site plan control, sub-division agreements, etc.) requiring that all trees planted on City and private property have either been properly acclimatized or grown in a climatic zone which has resulted in proper acclimatization to the Ottawa area;
11. Develop criteria to determine what constitutes a "significant" tree and a "heritage" tree and develop a protection strategy for these trees;
12. Revise underground public utility and site plan approval process provisions to ensure that trees are protected during the installation/development process;
13. Ensure that the number of trees on a particular street remains as an absolute minimum and that every effort be made to increase the number of trees on road allowances;
14. Explore opportunities for the City to establish an inventory of trees on private property and control their removal;
15. Review open space inventory to determine opportunities to designate areas for mixed urban forest development;
16. Review the feasibility of establishing a system whereby properties adjacent to downtown parks will be identified and, when these properties become subject to site plan control approval, additional border park tree planting will be required as a condition of site plan control approval;
17. Expand the City's "Do-It-Yourself" tree-planting program to include private properties in addition to road allowance properties.

PROBLEMS/SUCCESSSES:

A great deal of the deterioration of the urban forest coincides with the development of private properties. The city does not have legislative authority to control tree cutting on private property. The city has now applied to the province for applicable enabling legislation. Another significant initiative of this program is that it identifies trees as part of the city's inventory, whereas previously only such items as streets, sidewalks and buildings were considered to be part of inventory. A final issue is that there is no specific budget for the program at this time. Most of the elements of the program can be dealt with in-house, but items such as new tree planting (as opposed to replacement tree planting) will need a new budget allocation.

DOCUMENTATION:

Department of Engineering and Works Memorandum to Community Services and Operations Committee and City Council, September 13, 1990, **Final Report of the Corporate Task Force: Policy on the Management, Maintenance and Improvement of the Urban Forest**

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INITIATIVE:
4.11 CO2 Policy

CURRENT STATUS:

Conceptual Design

ADMINISTERED BY:

Department of Engineering and Works

ORIGIN/MOTIVATION:

The Environmental Advisory Committee recommended that the City of Ottawa adopt the City of Toronto's policy to achieve a 20% reduction in CO2 emissions within the city by the year 2005.

CONTACT PERSON:

George Assaff, Operations Engineer, Department of Engineering and Works, 1600 Scott Street, Ottawa, Ontario, K1Y 4N7, (613) 564-1142.

DESCRIPTION:

The Community Services and Operations Committee agreed to the Environmental Advisory Committee's recommendation and set their goal for CO2 reduction at 50% by the year 2005. The reductions apply to City operations only. Staff are currently preparing a report on how to achieve the 50% goal.

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INITIATIVE:
4.12 Energy conservation program

CURRENT STATUS:

Implementation (since 1978)

ADMINISTERED BY:

Department of Engineering and Works

BUDGET:

\$200,000/year (capital), \$50,000/year (operating)

STAFF:

1 (Energy Conservation Coordinator)

ORIGIN/MOTIVATION:

Energy crisis of the late 1970s.

CONTACT PERSON:

James Mouland, Director of Building and Supply, Department of Engineering and Works, 7 Bayview Rd., Ottawa, Ontario, K1Y 2C5, (613) 564-1905.

DESCRIPTION:

The energy conservation program consists primarily of initiatives which have a reasonable payback period of one to five years. Initiatives within the program include the following:

1. Retrofit and update heating, ventilation and air conditioning systems in City buildings;
2. The establishment of energy conservation standards for buildings constructed in the City
3. Street light conversion program (Transportation and Parking Branch. Funds for conversion taken from outside Energy Conservation Budget - Capital Equipment Budget);
4. Experiment with the use of alternative fuels for City vehicles;
5. Experiment with solar heating in 2 buildings;
6. Modify shower control systems in City recreational centres;
7. Replace roof insulation in City buildings;
8. Automation of City facilities using stand-alone computer technology linked to central computer via telephone lines;
9. Switch to more efficient lighting;
10. Heat recovery systems.

PROBLEMS/SUCSESSES:

Ontario Hydro has agreed to contribute \$800,000 towards the \$3.5 million cost (over 5 years) of replacing the city's street lights with more efficient ones. The availability of these funds was a contributing factor in the City's decision to investigate the implementation of such an initiative. Upon completion, the anticipated savings from the program are \$500,000 in operating costs per year.

Two of the City's initiatives did not meet expectations. The solar heating experiment was unsuccessful because the technology was not reliable. Problems were also encountered during the City's attempt to switch to propane as a fuel for some City vehicles. Between 1985 and 1987, about 20% of the City's police vehicles were modified for propane use. The operating costs of the first batch of 10 propane-powered vehicles were found to be higher than equivalent gasoline-powered vehicles because of high maintenance costs. Maintenance problems were not an issue with the second batch and they were found to operate economically. However, a number of other concerns arose over their use. First, some vehicle users were not receptive to fuel with propane because of the fuel's smell and problems with poor pick-up. Second, when propane gets very cold, it is not reliable. This would not be a problem if all of the City's propane-powered vehicles could be parked inside, but there was also concern over the ramifications in the event of a fuel leak. The exposure of the Police Headquarters in the event of such a likelihood was not considered warranted. These factors led to the curtailment of the program. Since City vehicles have a specific purpose, their reliability is a foremost consideration. Other considerations such as energy conservation were considered secondary if they interfered with the achievement of that purpose. The City has not abandoned its search for an alternative fuel. It has acquired two natural gas vehicles and is a member of the electric vehicle association. The problem with natural gas is that there are limited outlets in the city and the problem with electric vehicles is the high cost and the limited applications.

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INITIATIVE:
4.13 Underground storage tank program

CURRENT STATUS:
Implementation

ADMINISTERED BY:
Department of Engineering and Works

BUDGET:
\$160,000 (1990)

ORIGIN/MOTIVATION:
Internal awareness of the City's public accountability for environmental pollution problems motivated the City's clean-up of its underground storage tanks for building fuel. Awareness of the problem arose during a spill episode at the Region's diesel fuel storage tanks for its water filtration plant. The episode received widespread publicity in the Ottawa area. The City also initiated an inspection program for its underground vehicle fuel storage tanks. This program was motivated by the Province's requirement that all such tanks be checked for leaks and certified.

CONTACT PERSON:
James Mouland, Director of Building and Supply, Department of Engineering and Works, 7 Bayview Rd., Ottawa, Ontario, K1Y 2C5, (613) 564-1905.

DESCRIPTION:
The City initiated a study which investigated about 130 sites where it had previously stored oil and diesel fuel for buildings and determined that about 10 tanks had to be removed. Removal of the tanks was followed by a soil clean-up program on the sites.

PROBLEMS/SUCCESES:
The City is now trying to be pro-active and planning to replace its underground storage tanks periodically.

=====

INITIATIVE: CURRENT STATUS:
4.14 Open space and park naturalization program Pilot project

ADMINISTERED BY:
Department of Engineering and Works

ORIGIN/MOTIVATION:
Suggested by a member of the community.

CONTACT PERSON:

George Assaff, Operations Engineer, Department of Engineering and Works, 1600 Scott Street, Ottawa, Ontario, K1Y 4N7, (613) 564-1142.

DESCRIPTION:

The pilot project is being launched in a single neighbourhood. The City has held a local public meeting to discuss the program and modified some of its plans as a result. The pilot project will be reviewed in one year's time.

PROBLEMS/SUCCESES:

Residents have generally been in favour of the program. Some residents were concerned about the security implications of tall grass and shrubs, especially around schools and adjacent to public pathways. Other residents did not want areas adjacent to their backyards to be naturalized. All of these concerns have been addressed to date through modifications to the program. The potential for increased litter was a also a concern, so the City has increased its litter collection activities in the neighbourhood. A few residents who were unaware of the program have reacted by mowing grass on the naturalized public lands. Additional methods of informing the community about the program are being investigated, such as placing signs around the naturalized areas.

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INITIATIVE:

4.15 Waste Reduction and Recycling Program

CURRENT STATUS:

Various stages

ADMINISTERED BY:

Department of Engineering and Works

BUDGET:

\$11 million (includes refuse collection, recycling, disposal)

STAFF:

1 permanent, 3 temporary (collection and recycling services contracted out)

CONTACT PERSON:

Alison Rothschild, Waste Management Coordinator, Department of Engineering and Works, 1600 Scott St., Ottawa, Ontario, K1Y 4N7, (613) 564-1119.

DESCRIPTION:

All of the following initiatives are in the implementation stage, unless otherwise specified:

1. Blue Box Recycling of newspaper, cans, colour-sorted glass, telephone books, and waste oil.
2. Blue Box Recycling of plastics (pilot project), old corrugated cardboard, and other paper (under consideration).
3. Apartment Recycling (pilot project).

4. Residential curbside collection of leaves (implementation), used clothing (pilot project), white goods (under consideration).
5. Home composting program (implementation) and grass clippings collection (under consideration).
6. Collection of old corrugated cardboard from small commercial generators.
7. Fine paper recycling depots at community centres.
8. Waste reduction promotion activities.
9. City Hall office paper recycling.
10. Waste audit of City's office functions and other operations.
11. Hotel recycling program (pilot project).
12. Collection of aluminum beverage cans from industrial, commercial, and institutional sources (pilot project).
13. Blue Box Recycling for industrial, commercial, and institutional facilities (under consideration).
14. Curbside collection of used appliances and metal goods (under consideration).
15. Preparation of an office paper recycling guide.
16. Preparation of a reuse recycling directory (conceptual design).
17. Publication of a newsletter on waste management issues.
18. Garbage give-away day.
19. Promotional campaign for refillable soft drink containers (approved).
20. "Single Container Week."
21. Distribution of "No Junk Mail" stickers to households (approved).
22. City Council is seeking Special Legislation from the Province of Ontario to prohibit the distribution of advertising flyers to homes and businesses that do not want them.

PROBLEMS/SUCCESSSES:

By far the most serious problem encountered by the City's waste management program is that of finding markets for recyclables. Even those materials which have secure markets are subject to price fluctuations which can jeopardize the viability of the recycling program. A second problem is acquiring sufficient staff and resources to keep up with the growing demands of an expanding program. Finally, public education, although not a major problem, is always a challenge. It is important to get the correct information to the public and, even more importantly, to get them to follow directions issued on participating in waste reduction and recycling programs.

DOCUMENTATION:

Department of Engineering and Works Memorandum to Community Services and Operations Committee, June, 1990, **Waste Reduction and Recycling Program Update**.
 Department of Engineering and Works Memorandum to City Solicitor, November 1, 1990, **Municipal Policy on Incentives to Encourage Environmentally Acceptable Activity**.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Planning and Concertation

CONTACT PERSON:

Pierre Godin, Division Chief, Planning, Research and Planning Service, City of Montreal, 333 Saint-Antoine St. East, 4th Floor, Montreal, Quebec, H2X 1R9, (514) 872-5898.

DEFINITION OF SUD:

Relates to the notion of a disequilibrium between the consumption of goods and the resources necessary to produce those goods. For example, in the transportation sector, a sustainable development objective would be to reduce consumption by permitting mixed land uses, encouraging increased use of public transport and developing a strategy to contain urban sprawl.

INITIATIVES:

1. Coordinating Committee on the Environment (implementation)
2. Contaminated Soils Policy (implementation)
3. Environmental criteria established for the evaluation of capital projects (implementation)
4. Evaluation of environmental impacts (completed)
5. "Arc-en-Ciel" Project to twin with an American city over the issue of acid rain (implementation)
6. Participation on the Environmental Committee of a local business improvement society (implementation)

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ORGANIZATIONAL UNIT:

1.2 Public Works

CONTACT PERSON:

René Morency, Director, Public Works, City of Montreal, 700 Saint Antoine St. East, Montreal, Quebec, H2Y 1A6, (514) 872-2451.

DEFINITION OF SUD:

In an environmental context, it means the delivery of basic services to the population without disturbing the ecological setting.

INITIATIVES:

1. Reduction of road salt application (implementation)
2. Conversion to high pressure sodium lighting (completed)
3. Integrated Waste Management Master Plan (conceptual design)

MONTREAL

4. Study on the location of alternative waste disposal sites (under way)
5. Household hazardous waste collection days (implementation)
6. Green Box residential curbside recycling for newspaper, glass, metal and plastic (implementation)
7. Use of standardized containers for domestic waste set-outs (pilot project)
8. **Industrial, commercial and special waste composition study (completed)**
9. Study to locate a storage site for large recyclables (conceptual design)
10. Backyard composting program (pilot project)
11. Leaf composting program (implementation)
12. Collection of hazardous materials generated by city operations (implementation)
13. Snow disposal master plan (implementation)
14. Study to identify alternative snow disposal methods to river disposal (implementation)
15. Treatment of drinking water with activated carbon (conceptual design)
16. Study on the transport of hazardous materials (conceptual design)
17. PCB management program (implementation)
18. Recovery of CFC refrigerants (conceptual design)
19. **Mapping of illegal dump sites (completed)**
20. **Domestic waste composition study (completed)**
21. **Recycled materials market study (completed)**

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ORGANIZATIONAL UNIT:

1.3 Housing and Urban Development

CONTACT PERSON:

Jean Landry, Superintendent of Open Spaces, Housing and Urban Development, City of Montreal, 276 rue Saint-Jacques, bureau 810.A, Montreal, Quebec, H2Y 1N3, (514) 872-2635.

Comité intergouvernemental de recherches
urbaines et régionales

CIRUR

DEFINITION OF SUD:

It has to do with a goal of society that is more than the protection of the environment. It includes the preservation, conservation and utilization of resources without compromising the needs of future generations.

INITIATIVES:

1. Park development project for the islands of Montreal (abandoned)
 2. Purification of water in the Lachine Canal (on hold)
 3. **Mont Royal Improvement Project (implementation)**
 4. **Greenspace Network Master Plan (implementation)**
 5. **Bicycle Network Master Plan (implementation)**
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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 Coordinating Committee on the Environment

DATE ESTABLISHED:

Approved 1987,
Constituted 1988.
Abolished 1991.

ORIGIN/MOTIVATION:

A decision by the Secretary-General (City Manager).

CONTACT PERSON:

Normand Brunet, Planning Advisor, Planning and Concertation Service, City of Montreal, 333 rue Saint Antoine est, Montreal, Quebec, H2X 1R9, (514) 872-8353.

MEMBERSHIP:

16 members from 8 of 12 departments.

FUNCTION/GOALS:

The goals of the committee were as follows:

1. Coordinate environmental initiatives requiring the intervention of more than a single department and participate in the development of reports, if necessary.
2. Coordinate the preparation of certain internal policy reports, such as the policy on contaminated soils.
3. Advise the City on environmental policy issues and prepare position papers.
4. Attempt to introduce an environmental ethic into City operations.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Waste Composition Study for Domestic Waste

CURRENT STATUS:

Completed, 1989

ADMINISTERED BY:

Public Works

ORIGIN/MOTIVATION:

The report is a background document for the City's Integrated Waste Management Master Plan and has also been used in planning the City's curbside collection program.

CONTACT PERSON:

Diane André, Planning Officer, Public Works, City of Montreal, 700 rue Saint Antoine est, bureau 3-120, Montreal, Quebec, H2Y 1A6, (514) 872-2093.

DESCRIPTION:

The research for this study was undertaken by faculty at the University of Quebec. A daily sample of 200 kg. of domestic waste (7,300 kg. for the total project) was collected from 34 sites in nine different neighbourhoods. The findings of the study indicate that domestic waste in Montreal consists of 31.2% paper, 6.2% glass, 4.4% metal, 6.5% plastic, 36.1% organic waste, 0.7% hazardous waste and 14.9% other types of waste.

PROBLEMS/SUCCESES:

The most significant aspect of this study is that it examined waste composition over a 12 month period and was able to identify seasonal differences.

DOCUMENTATION:

Léonard, J.F., Léveillé, J., Reveret (1989) **Rapport sur la production et le traitement des déchets domestiques à Montréal** (Montréal: Groupe de recherche et d'analyse interdisciplinaire en gestion de l'environnement (G.R.A.I.G.E.), Université du Québec à Montréal)

INITIATIVE:**4.2 Waste Composition Study for Industrial, Commercial and Special Wastes****ADMINISTERED BY:**

Public Works

CURRENT STATUS:

Completed 1989

ORIGIN/MOTIVATION:

The report is one of the background documents for the City's Integrated Waste Management Master Plan.

CONTACT PERSON:

Diane André, Planning Officer, Public Works, City of Montreal, 700 rue Saint Antoine est, bureau 3-120, Montreal, Quebec, H2Y 1A6, (514) 872-2093.

DESCRIPTION:

The findings of the study indicate that the City's industrial/commercial waste consists of 12.5% organic waste, 9.4% plastic, 1.7% glass, 36.2% paper, 0.2% special waste, 20.4% other waste, 13.7% wood and 5.9% metal.

DOCUMENTATION:

Serrener Consultation inc., EconAB inc. (1989) **Caractérisation des déchets industriels et commerciaux ainsi que des déchets de démolition et des déchets spéciaux** (Montréal).

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INITIATIVE:
4.3 Study of Recycling Markets

CURRENT STATUS:
Completed

ADMINISTERED BY:
Public Works

ORIGIN/MOTIVATION:
The report is one of the background documents for the City's Integrated Waste Management Master Plan. The rapid evolution of recycling markets made it imperative to gain a better understanding of market operations.

CONTACT PERSON:
Diane André, Planning Officer, Public Works, City of Montreal, 700 rue Saint Antoine est, bureau 3-120, Montreal, Quebec, H2Y 1A6, (514) 872-2093.

DESCRIPTION:
The first part of the study was prepared in consultation with other municipalities and collection and recycling companies. It surveys the current status of recycling markets for paper, cardboard, glass, plastic, textiles, tires and used oil in different regions of Quebec. The study presents a number of market scenarios to the City of Montreal, based partly on information given in the City's waste composition studies. The second part of the study examines the role and responsibilities of different levels of government for recycling market development.

DOCUMENTATION:
ADS Associes ltee. (1990) Etude de marché concernant les matières non énergétiques générées par le traitement des déchets solides.

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INITIATIVE:
4.4 Mapping of Illegal Dump Sites

CURRENT STATUS:
Completed

ADMINISTERED BY:
Public Works

ORIGIN/MOTIVATION:
The report is one of the background documents for the City's Integrated Waste Management Master Plan.

CONTACT PERSON:
Diane André, Planning Officer, Public Works, City of Montreal, 700 rue Saint Antoine est, bureau 3-120, Montreal, Quebec, H2Y 1A6, (514) 872-2093.

DESCRIPTION:

This report was prepared by McGill University's Geotechnical Research Centre. The objectives of the study were: to identify the locations of illegal dumps on private or public lands in the City; to classify the dumps; to evaluate their environmental impacts; to produce a map showing their locations; and to formulate recommendations concerning the different types of actions that the City could take to stop the practice of illegal dumping.

DOCUMENTATION:

Centre de recherche geotechnique (1990) **Cartographie des depots sauvages et des ramblayages illicites de terrain sur le territoire de la Ville de Montreal.** (Montreal: McGill University).

INITIATIVE:

4.5 Contaminated Soils Rehabilitation

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Planning and Concertation

ORIGIN/MOTIVATION:

This project arose out of the City's efforts to comply with provincial policy on the rehabilitation of contaminated soils.

CONTACT PERSON:

Normand Brunet, Planning Advisor, Planning and Concertation Service, City of Montreal, 333 rue Saint Antoine est, Montreal, Quebec, H2X 1R9, (514) 872-8353.

DESCRIPTION:

The project proposes guidelines for the acquisition and transfer of contaminated lands in the City. It attempts to establish the City's position regarding the issue and consequently allow the City to engage in negotiations with the provincial government over financing and technological initiatives.

PROBLEMS/SUCCESES:

The City has encountered difficulties in reaching an agreement with the provincial government over financing and the identification of a contaminated soils disposal site.

COMMENTS:

This issue is a complex and important one considering the size of the problem. It is equally important with regard to its implications for the acquisition of land which might constitute a municipal land bank.

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INITIATIVE:

4.6 Environmental Evaluation Criteria for Tri-annual Capital Projects ProgramADMINISTERED BY:
Planning and ConcertationCURRENT STATUS:
Implementation

ORIGIN/MOTIVATION:

Traditionally, the Impact Analysis Division only provided support services for the analysis of financial impact of projects. In 1989, the Division recommended the inclusion of environmental impacts in their analyses and proposed to Executive Council to include these considerations in the evaluation of capital works projects.

CONTACT PERSON:

Pierre Legendre, Chief, Impact Analysis Division, Planning and Concertation, City of Montreal, 333 rue Saint Antoine est, Montreal, Quebec, H2X 1R9, (514) 872-8658.

DESCRIPTION:

This strategy aims to clarify the decision-making process used in the City's tri-annual capital works program. The list of evaluation criteria has been modified to include consideration of environmental impacts, interpreted in its very broadest sense. Thus the list includes economic, cultural, biophysical and social criteria. The strategy also seeks to ensure consideration of environmental concerns from the earliest phases of the project.

PROBLEMS/SUCCESESSES:

The Division can provide support services for the evaluation of environmental impacts, but it is up to each individual department to decide whether or not to use these services.

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INITIATIVE:

4.7 Bicycle Network Master PlanCURRENT STATUS:
ImplementationADMINISTERED BY:
Housing and Urban Development

ORIGIN/MOTIVATION:

The provincial government offers a subsidy program for the construction of bicycle paths.

CONTACT PERSON:

Jean Décarie, Planning Officer, Housing and Urban Development, City of Montreal, 276 rue Saint Jacques, Montreal, Quebec, H2X 1N1, (514) 872-6257.

DESCRIPTION:

The Master Plan will identify means for implementing the City's policy on bicycles and will integrate the bicycle network with the City's open space and transportation network. The objectives of the plan are: to encourage the use of bicycles for recreational and transportation purposes; to promote bicycle safety; and to extend and consolidate the bicycle network.

INITIATIVE:

4.8 Green Space Network Master Plan

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Housing and Urban Development

ORIGIN/MOTIVATION:

The idea originated with the City's administration.

CONTACT PERSON:

Jean Décarie, Planning Officer, Housing and Urban Development, City of Montreal, 276 rue Saint Jacques, Montreal, Quebec, H2X 1N1, (514) 872-6257.

DESCRIPTION:

The network consists of a system of recreational pathways linking the City's principal public green spaces, institutional and community green space, open space, and railroad and hydro-electric transmission corridors. The objectives of the plan are:

1. to maximize the integration of each part of the green space network with adjacent neighbourhoods;
2. to increase the amount of space available for recreation;
3. to encourage participatory management for open spaces and open the way to further community and local initiatives.

PROBLEMS/SUCCESSSES:

Some of the negotiations to obtain access to institutional lands have been particularly lengthy.

INITIATIVE:

4.9 Mont Royal Improvement Project

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Housing and Urban Development

ORIGIN/MOTIVATION:

An election promise of the present administration to protect the area from the threat of development.

CONTACT PERSON:

Jean Décarie, Planning Officer, Housing and Urban Development, City of Montreal, 276 rue Saint Jacques, Montreal, Quebec, H2X 1N1, (514) 872-6257.

DESCRIPTION:

The project aims to restore the entire territory of the mountain, including those lands currently occupied by two universities and a cemetery. The objectives of the plan are as follows:

1. to encourage conservation of resources, public education, recreation and tourism;
2. to strengthen the park's management structure; and
3. to ENHANCE the surroundings of the mountain.

PROBLEMS/SUCCESES:

Consultations with some of the interest groups participating in the planning process have encountered difficulties and as a result, the City has delayed its contribution of physical and human resources to the project. In the mean time, the funds originally allocated to the project have been diverted elsewhere.

DOCUMENTATION:

Service de l'habitation et du développement urbain (no date) **Plan préliminaire de mise en valeur du Mont Royal.**

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INITIATIVE:

4.10 Aquatic Plant Water Filtration System

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Recreation and Community Development Governmental Committee on Urban and Regional Research

Comité intergouvernemental de recherches urbaines et régionales **CIRUR**

ORIGIN/MOTIVATION:

This project, which was initiated in 1989, came out of a study to determine the future of Ile Notre Dame.

CONTACT PERSON:

Gilles Vincent, Botanist, Jardin Botanique, City of Montreal, 4101 rue Sherbrooke est, Montreal, Quebec, H1X 2B2, (514) 872-1437.

DESCRIPTION:

Water from a small lake on Ile Notre Dame used for recreation and swimming is purified by filtration through an artificial marsh. The water treated by this ecosystem approach is of very good quality and safe for swimming. Montreal's botanical garden supplied the 125,000 aquatic plants used to filter the water.

PROBLEMS/SUCCESES:

The pump and valve system used for water filtration is very complex. Some problems were encountered in testing the system and it was two months before it became operational. In spite of these early problems, 148,000 swimmers used the lake between July and September of 1990.

DOCUMENTATION:

Un bain de nature, Vivre Montreal.

INITIATIVE:

4.11 Energy Efficiency Program

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Purchasing and Buildings

ORIGIN/MOTIVATION:

The City administration has committed itself to achieving a 3% reduction in energy consumption for the present year.

CONTACT PERSON:

Claude Bacon, Section Chief, Energy and Engineering Systems, Purchasing and Building Services, City of Montreal, 385 rue Sherbrooke est, Montreal, Quebec, H2X 1E3, (514) 872-8484.

DESCRIPTION:

The objectives of this initiative are to modify the energy use habits of building users, to switch to new technologies, and to use alternative sources of energy in such a way as to ensure the comfort of employees while maintaining respect for the environment. The City's newsletter has been found to be an important mechanism for educating City employees on the benefits of energy conservation.

PROBLEMS/SUCCESES:

Achieving the above objective will require modification of the energy use habits of people in 650 different city buildings, including workshops, garages, warehouses and office buildings. The biggest problem in achieving this objective is ensuring observance of old and new energy consumption standards. Since Purchasing and Building Services does not have the authority to impose standards on other services, it is up to each individual service to adopt these standards. There is no centralized agency responsible for regulating energy consumption in the City but rather a wide variety of individuals and agencies. For example, security guards are responsible for ensuring that building thermostats are set at standard levels. Significant energy savings were achieved in the early 1980s through the conversion of oil to gas heating systems and a reduction in energy for cooling purposes in arenas at night.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Purchasing and Supply Services

CONTACT PERSON:

André Demers, Director, Purchasing and Supply, City of Sherbrooke, 10 Terrasse Galt, Sherbrooke, Quebec, J1H 5G7, (819) 821-5500.

DEFINITION OF SUD:

Implies more awareness of the impacts of decision making on the future.

INITIATIVES:

1. Use of recycled paper for all municipal publications, correspondence and photocopying (implementation)
2. "ECONERGIE" program to encourage employees to conserve electricity in the work place (implementation)
3. Computerized climate control system for municipal buildings (implementation)

COMMENTS:

The initiatives have been successful to date. The cost differences from traditional practices have been marginal, particularly for recycled paper which had slightly higher prices initially. Recycled paper was difficult to find because the variety of products offered and the number of retailers was limited. Today, these issues are less significant. Employees used to be concerned about the quality of recycled paper, but these attitudes have changed. At the moment, decisions on whether to use recycled products are left to the department heads.

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ORGANIZATIONAL UNIT:

1.2 Public Works

CONTACT PERSON:

André Désilets, Director, Engineering and Environmental Services, City of Sherbrooke, 50 Terrasse Galt, Sherbrooke, Quebec, J1H 5G7, (819) 821-5798.

DEFINITION OF SUD:

Not familiar with the expression.

INITIATIVES:

1. Reduction in the application of road salt and other chemicals (implementation)
2. Reduction in the use of pesticides (implementation)
3. Curbside collection for residential recycling (pilot project)

- 4. Establishment of a sorting facility for recyclables (conceptual design)
- 5. Recovery and sale of sewage sludge (conceptual design)
- 6. Establishment of a position for an environmental engineer with responsibility for developing a municipal environmental policy and for supporting the work of a local environmental committee.

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ORGANIZATIONAL UNIT:

1.3 Recreation and Community Services

CONTACT PERSON:

Alvin Doucet, Director, Recreation and Community Services, City of Sherbrooke, 50 Terrasse Galt, Sherbrooke, Quebec, J1H 5G7, (819) 823-5168.

DEFINITION OF SUD:

Means ensuring the well-being of future generations.

INITIATIVES:

- 1. Community-based responsibility for identification and management of programs (implementation)

COMMENTS:

The philosophy and orientation of the department's recreation services are strongly environmental.

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ORGANIZATIONAL UNIT:

1.4 Housing and Urban Development Services

CONTACT PERSON:

Jean-Marc Beaudoin, Urbanist, Housing and Urban Development Services, City of Sherbrooke, 50 Terrasse Galt, Sherbrooke, Quebec, J1H 5G7, (819) 821-5915.

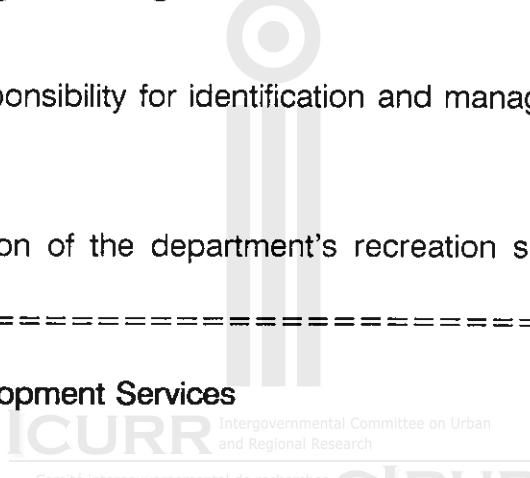
DEFINITION OF SUD:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (from the Brundtland definition).

INITIATIVES:

- 1. Environmental component in municipal plan (conceptual design)
- 2. Inventory of trees on public and private lands (implementation)

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Department of Public Works

CONTACT PERSON:

M. Langlois, Service des travaux publics, 65 Ste. Anne St., Quebec City, G1R 3X5, (418) 691-6682.

DEFINITION OF SUD:

Not familiar with the term.

INITIATIVES:

1. Reduced use of chemical controls for snow removal operations (implementation).
2. New snow disposal sites have helped achieve a 75% reduction in the amount of snow dumped in the river over a three year period (implementation).
3. Construction of a materials recovery facility for the Quebec Urban Community (conceptual design).
4. Curbside residential recycling program for paper, glass, metal, plastic and cardboard (service currently offered to 10% of the city's households).
5. Curbside collection program for leaves and grass clippings (implementation since 1988).
6. Commercial fruit and vegetable waste collection program (implementation since 1990).

COMMENTS:

Program costs continue to be a major constraint. The habits of the public will also have to change, for example in the way that they maintain their property and participate in recycling activities or backyard composting.

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ORGANIZATIONAL UNIT:

1.2 Planning Department

CONTACT PERSON:

Serge Fillion, Director, Planning Department, Service d'urbanisme, City Hall, 2 rue Desjardins, C.P. 700, Quebec City, Quebec, G1R 4S9, (418) 691-6202.

DEFINITION OF SUD:

Agreed with the definition of the Brundtland Commission.

INITIATIVES:

1. Strategy for reducing the impact of automobile circulation (implementation).
2. Historic preservation program (implementation).
3. Land acquisition program for the protection of ecosystems and management of development (implementation).
4. Policy for the protection of selected ecosystems within the city, such as river shorelines (implementation).
5. SUD statements in Official Plan (adopted 1988).

COMMENTS:

The unique historical character of the city represents a significant challenge for the department and the City. Principles such as the protection of historical sites are well known and integrated within local development strategies. The implementation of a comprehensive local SUD strategy for the City has not yet been completed, but the creation of a new Environment Department is seen as an important step in this process. A Municipal policy for sustainable development will likely be in place before the end of the mandate of the current administration.

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ORGANIZATIONAL UNIT:
1.3 Department of Parks and Recreation**CONTACT PERSON:**

Laurent Bélanger, Director, Parks and Recreation Department, 1595 Mgr. Plessis, Quebec City, Quebec, G1M 1A2, (418) 691-6017.

DEFENITION OF SUD:

Agreed with the definition of the Brundtland Commission.

INITIATIVES:

1. Land reserve acquisition program (implementation).
2. Urban forestry policy (implementation).
3. Pedestrian and bicycle network (conceptual design).

COMMENTS:

Although it is not located within the Planning Department, Quebec's Healthy City project has played an important role in coordinating responsibilities. The will to act on SUD issues has been reflected in political and bureaucratic decisions, but the public has reacted badly to the costs of these decisions, sometimes because of lack of information. There also tends to be a lack of integration among various bodies impacting on quality of life and sustainable development issues.

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ORGANIZATIONAL UNIT:

1.4 Purchasing Department

CONTACT PERSON:

M. Chabot, Director, Purchasing Department, 1195 St. Jean St., Quebec City, Quebec, (418) 691-6682.

DEFINITION OF SUD:

Not familiar with the term.

INITIATIVES:

1. Establishment of a committee to identify dangerous products and treatment methods (implementation).
2. Use of cleaning products that are least environmentally damaging and most efficient (implementation).
3. Use of bio-degradable cleaning products (implementation).
4. Use of recycled paper for photocopying, envelopes and many Municipal publications (implementation).
5. Use of re-inked printing ribbons (implementation).
6. Use of long-life light bulbs (under consideration).

COMMENTS:

The two principal problems encountered have been costs and attitudes. The lack of awareness about environmentally friendly alternatives in the market place has also been a problem.

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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:

DATE ESTABLISHED:

2.1 Environment Department (Service de l'environnement) 1991

STAFF:

65 persons/year

REPORTS TO:

Hervé Brosseau, Assistant Executive Director, Equipment Division, City Hall, 2 rue Desjardins, Quebec City, Quebec, GIR 4S9, (418) 691-6507.

CONTACT PERSON:

Mme Paulin, Director, Service de l'environnement, City Hall, 2 rue Desjardins, Quebec City, Quebec, GIR 4S9, (418) 691-6899.

FUNCTIONS/GOALS:

1. Development of short and long term environmental policies - the Green Plan.
2. Development and application of programs to preserve, protect and insure the quality of the environment, including the quality of water, air, soil and vegetation.
3. Development and application of programs to insure that municipal land and properties are designed, used and maintained according to conditions that are compatible with the environment.
4. Increase citizens awareness and participation in the protection and preservation of the environment.
5. Encourage a proactive attitude and partnership among different actors likely to have an impact on the urban environment.

INITIATIVES:

1. The city has developed a 5-year plan for the urban forest to be used as a working paper which is revised on a yearly basis. It includes the following initiatives:
 - a) Establishment of a standard or ratio of one urban tree per citizen to be put into effect within a given time frame (implementation).
 - b) Development of a computerized inventory of all urban trees including those which have been recently removed (implemented).
 - c) Development and installation of a new above ground sidewalk system designed to prevent the soil from compacting, allowing the trees to survive (implementation).

PROBLEMS/SUCCESES:

The objectives of the 5-year plan set out for 1991 have been met within the planned time frame.

**DOCUMENTATION:**

The 5-year urban forest plan (1991-1996) - operational document revised on a yearly basis. The Green Plan to be completed by the end of January 1992.

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1. CITY GOVERNMENT DEPARTMENTS
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ORGANIZATIONAL UNIT:

1.1 Planning

CONTACT PERSON:

Bob Robertson, Director of Planning and Development, City of Fredericton, P.O. Box 130, Fredericton, New Brunswick, E3B 4X7, (506) 452-9493.

DEFINITION OF SUD:

It is the current "buzzword" for traditional, long-range planning but with a stronger environmental component.

INITIATIVES:

- 1. Sustainable Development Component to New Municipal Plan (conceptual design)

COMMENTS:

In Atlantic Canada, most people see sustainable development as implying continued economic growth whereas elsewhere it may imply growth management. Recent provincial environmental legislation has given the City more authority to control pollution. For example, the Clean Water Act allows the City to control land uses that have the potential to contaminate the City's groundwater supply.

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ORGANIZATIONAL UNIT:

1.2 Public Works

CONTACT PERSON:

John Bliss, City Engineer, City of Fredericton, P.O. Box 130, Fredericton, New Brunswick, E3B 4X7, (506) 452-9500.

DEFINITION OF SUD:

Economic activity that is not detrimental to the environment.

INITIATIVES:

- 1. Waste recycling program (implementation)

COMMENTS:

The community accepts and is strongly in favour of recycling, but it is very expensive.

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4. SELECTED INITIATIVES

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INITIATIVE:**4.1 Sustainable Development Component to New Municipal Plan****CURRENT STATUS:**

Draft submitted to Council April, 1991.

ADMINISTERED BY:

Planning and Development

ORIGIN/MOTIVATION:

Review of the Municipal Plan.

CONTACT PERSON:

Bob Robertson, Director of Planning and Development, City of Fredericton, P.O. Box 130, Fredericton, New Brunswick, E3B 4X7, (506) 452-9493.

DESCRIPTION:

Although the term "sustainable development" is not used in the Plan, the concept of sustainability is embodied in some of the Plan's growth strategy goals. These include the following:

1. To facilitate sustainable growth of the city through the continued diversification of the city's economy.
2. To provide adequate municipal services and associated utilities in order to sustain existing development and facilitate future development.
3. To protect and enhance the integrity of the natural environment.
4. To achieve a regional pattern of development which is environmentally sound, economically efficient and logically integrated with and beneficial to the city.

Selected policy statements in the Municipal Plan with direct relevance for sustainable urban development include the following:

Healthy Communities

1. Pursue the development of Fredericton as a healthy community and the participation of the City in the healthy community concept.

Linear Open Space System

2. Actively pursue the development of a linear open space system to provide quality and continuous pedestrian (and bicycling) linkages throughout the City.

Environmentally Sensitive Areas

3. Protect and limit development in all environmentally sensitive areas, including: river banks and ravines, areas with flooding risk, areas with significant development constraints, significant natural habitats, and other areas of open space value.
4. Endeavour to ensure that land uses within and abutting designated open spaces and other environmentally sensitive areas are compatible with and have minimal impacts on the natural environment.

5. Endeavour to secure land within environmentally sensitive areas through appropriate zoning mechanisms, as a condition of approval for development agreements, and through land acquisitions.
6. Designate the City's most significant environmentally sensitive areas as Open Space on the Generalized Future Land Use Map.

Water Quality

7. Continue to undertake measures to protect water quality, including: provision of adequate sewage treatment facilities; implementation of adequate storm water management practices; protection of shoreland areas and implementation of setback requirements for development; ensuring that industry and other incompatible uses have minimal environmental impacts on any water course; encouragement of uses which are within the environmental capacity of the river or other water bodies; investigation of methods to regulate the commercial removal of topsoil in shoreland areas.

Air Quality

8. Discourage the development of industry and other land uses in the City and region which generate emissions with deleterious impacts on the quality of air.

Power Transmission Lines

9. Monitor the impacts of major power transmission lines and facilities and establish policies to provide appropriate separation distances with residential areas, hospitals and other land uses.

Hazardous Lands and Materials

10. Permit the reuse of former disposal or industrial sites for alternate uses only upon determination that such use will not result in a health risk due to contamination or methane gas.
11. Require development proposals involving hazardous materials or waste to: be adequately separated from environmentally sensitive areas, residential uses and other public facilities; and incorporate rigorous storage and operational standards pursuant to the National Building Code, Provincial standards and additional conditions as deemed necessary by Council.
12. Seek Provincial Government assistance to relocate or provide any necessary remedial actions to ensure existing land uses involving hazardous materials pose minimal risk to the environment and public health.

Waste Management

13. Show leadership and implement programs for the promotion and implementation of environmentally friendly practices regarding the four R's: reduction, reuse, recycling and recovery.
14. Promote the development and implementation of an aggressive recycling program with a greater emphasis on the commercial/industrial sectors.
15. Encourage the development of markets for recycled goods and materials.

Snow Removal Sites

16. Seek snow removal dump sites which avoid the St. John River and other environmentally sensitive areas.

Cycling Network

17. Facilitate the provision of properly designed, safe and convenient facilities for bicycle travel.
18. Facilitate the creation of a bicycle network linking all parts of the city and incorporating safe connections between linear open spaces and roadways.
19. Facilitate the separation of bicycle and pedestrian traffic on the "Green" and other open spaces.
20. Facilitate the designation of a system of streets as bicycle routes.
21. Facilitate the provision of adequate parking facilities for bicycles as a condition of approval of new developments such as schools, churches, service, health, recreational, shopping and commercial facilities and other developments.
22. Facilitate the provision of bicycle lanes or wider paved shoulders on appropriately selected collector and arterial streets.

Economic Development

23. Seek to provide a policy environment which facilitates an efficient and cost effective pattern of development, enables the economic provision of Municipal services, and directs the location of development in a manner consistent with the capital works program and the City's economic, social and environmental objectives.

Housing

24. Seek the provision of affordable housing by: encouraging a range of housing types and densities; considering the reduction of minimum lot standards as prescribed in the Zoning Bylaw; making available, where appropriate, City owned land for affordable residential development; permitting basement apartments in single family dwellings in accordance with the relevant provisions of the Zoning Bylaw; cooperating with the Federal and Provincial Governments and housing authorities to facilitate affordable housing.
25. May require, in the consideration of residential development proposals, the preparation of a development scheme which satisfactorily addresses: the environmental impact of the development; transportation impacts, including the provision for vehicular access and parking, public transit and pedestrian and bicycle needs.
26. Seek to ensure that the design of new residential areas: places particular emphasis on the needs of public transit, pedestrians and cyclists; minimizes adverse impacts on the environment; facilitates energy efficiency.

Efficient Development

27. Seek to ensure that growth and development is cost effective and environmentally sound by: concentrating new growth in adequately serviced and properly planned areas; planning for the contiguous expansion of the built-up area; encouraging in-fill development of under-utilized lands; discouraging development in physically unsuitable or environmentally sensitive areas; limiting development in unserved areas of the city.

DOCUMENTATION:

City of Fredericton (1991) Capital City Municipal Plan: Draft.

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urbaines et régionales **CIRUR**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Public Works

CONTACT PERSON:

Ed Smith, City Engineer, City of Charlottetown, P.O. Box 98, Charlottetown, Prince Edward Island, C1A 7K2, (902) 566-5548.

DEFINITION OF SUD:

Familiar with the concept but unable to define it.

INITIATIVES:

1. Corrugated cardboard recycling program for the commercial sector (under consideration)

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ORGANIZATIONAL UNIT:

1.2 Planning and Development Controls

CONTACT PERSON:

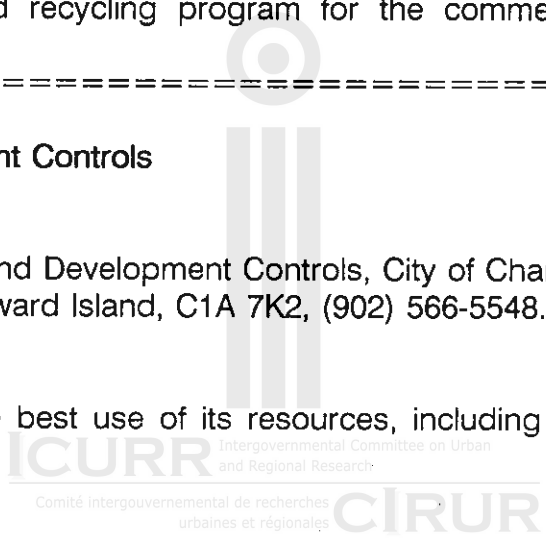
Don Poole, Head, Planning and Development Controls, City of Charlottetown, P.O. Box 98, Charlottetown, Prince Edward Island, C1A 7K2, (902) 566-5548.

DEFINITION OF SUD:

Development that makes the best use of its resources, including such resources as infrastructure.

INITIATIVES:

1. Infill housing policy (conceptual design)
 2. Encouraging large setbacks from waterfront for subdivision designs because of potential for rise in tides associated with the Greenhouse effect (implementation)
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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 City Administrator's Office

CONTACT PERSON:

J.S. Burke, City Administrator, City of Dartmouth, P.O. Box 817, Dartmouth, Nova Scotia, B2Y 3Z3, (902) 464-2168.

DEFINITION OF SUD:

The ability to improve the economic and social structure of the city. It also implies the creation of places of work and residence where there is a cohesive, enduring community structure.

INITIATIVES:

1. Burnside Industrial Complex (implementation)
2. Healthy Communities Project (implementation)
3. Co-development of a waterfront site with private developers (implementation)

COMMENTS:

The Burnside Industrial Complex is a 3,000 acre industrial/business park that began 20 years ago in response to a perceived need to increase the City's commercial tax base. The Complex contains 1,500 businesses employing 13,000 people and contributes about \$20 million in taxes to the City each year. The City's tax assessment base is now 45% commercial and 55% residential and the strong commercial component allows the City to sustain itself economically. The biggest problem facing municipal initiatives has been the downloading of the federal deficit, first to the provinces and then to municipalities. If Dartmouth had not had a substantial commercial tax base, it would have had to cut its programs.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 Healthy Dartmouth Committee

DATE ESTABLISHED:

1989

REPORTS TO:

Board of Health

ORIGIN/MOTIVATION:

The Committee was established to promote citizen participation in the City's Healthy Communities Project.

CONTACT PERSON:

Anne Cogdon, Coordinator, Healthy Dartmouth Project, Dartmouth General Hospital, 325 Pleasant St., Dartmouth, Nova Scotia, B2Y 4G8, (902) 465-8415.

MEMBERSHIP:

There are 15 members on the Committee, all of whom are appointed by the Board of Health. They include representatives from the Atlantic Health Unit, the Board of Health, community groups, interest groups, business groups and interested members of the general public.

DESCRIPTION:

The mandate of the Committee includes: promoting the Healthy Communities Project in Dartmouth, encouraging and facilitating community involvement and public input into the Healthy Communities Project, proposing ways and means of identifying and meeting community health needs, preparing a "Healthy Dartmouth 2000" Program, undertaking projects consistent with the Healthy Dartmouth Program, and evaluating progress towards the Healthy Community at regular intervals. The Healthy Dartmouth Committee had been in operation for a year when it became apparent that community volunteers did not have the time needed to deal with administrative and research tasks in addition to the time they devoted to attending meetings. The Nova Scotia Department of Health and Fitness subsequently agreed to provide funds for a coordinator position on an annual basis. The province views the City's Healthy Community Project as a pilot project for other similar initiatives in the province. Two community committees for which the Healthy Dartmouth Committee has had responsibility are the City Committee on Youth studying youth issues and the Five Star Committee investigating accessibility issues in the City. The latter committee originally reported to the Healthy Dartmouth Committee but now reports directly to the Board of Health. The Healthy Dartmouth Committee is now focusing on developing a Community Needs Assessment and Action Plan. As part of this strategy, it is holding three public meetings to which the general public and 450 specific members of the community have been invited. The first meeting will attempt to define a Vision of a Healthy Community. The second meeting will try to determine the current state of community health in the City. The objective of the third meeting is to prepare a preliminary Action Plan.

PROBLEMS/SUCSESSES:

The community-based aspects of a healthy community project can only succeed if there is support from volunteers in the community and if the advisory committee has one or more full-time support staff.

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4. SELECTED INITIATIVES

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INITIATIVE:**4.1 Healthy Communities Project****CURRENT STATUS:**

Implementation

ADMINISTERED BY:

Board of Health

ORIGIN/MOTIVATION:

The Mayor, a medical doctor, felt that preventive medicine should have a more important role in health care and has been behind the Healthy City/Community concept since its inception. Dartmouth was one of the first cities in Canada to declare itself a member of the national Healthy Communities Project.

COUNCIL APPROVAL:

1987

CONTACT PERSON:

J.S. Burke, City Administrator, City of Dartmouth, P.O. Box 817, Dartmouth, Nova Scotia, B2Y 3Z3, (902) 464-2168.

DESCRIPTION:

The first phase of the Healthy Communities Project in Dartmouth attempted to show what the City and its various departments could do by introducing health as a major factor in all municipal planning. The idea in Dartmouth has been to show that the City is serious about its public policies before going to the general population and getting input for future policies and directions. Initiatives implemented during the first phase included the following:

1. Declaration of a voluntary non-smoking policy for the City.
2. Health concerns incorporated into the corporate planning process.
3. Development of an Occupational Health and Safety Policy.
4. Creation of an Employee Assistance Program.
5. Review of purchasing policy implications for the environment.
6. First municipality in Nova Scotia to start newspaper recycling.
7. Establishment of an Affirmative Action Program to encourage black businesses (\$450,000 budget in 1990)
8. Establishment of a land-banking scheme for affordable housing.
9. AIDS policy for employees.
10. Participation in a joint provincial-City study on the establishment of a transfer site for special waste in Burnside Industrial Park.

DARTMOUTH

- 11. Researched and produced a Hazardous Spray Bylaw which makes companies intending to spray pesticides give warning in the area in which they are spraying and encourages non-toxic,non-chemical spray as much as possible.

In the second, community-based phase of the Project, a Healthy Communities Committee has been established and a Healthy Communities Committee coordinator hired.

PROBLEMS/SUCCESESSES:

None identified.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Engineering and Works Department

CONTACT PERSON:

Peter S. Connell, Director, Engineering and Works Department, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6966.

DEFINITION OF SUD:

Aware of the concept but unable to define it.

INITIATIVES:

1. Joint funding of a new sewage treatment plant (conceptual design)
2. **Waste Recycling Program (implementation)**
3. Conversion of street lights to high pressure sodium (implementation)
4. Use of reduced wattage in green and amber traffic lights (implementation)
5. Computerized traffic signal operation (implementation)
6. **Establishment of an Energy Management Office (implementation)**

COMMENTS:

Budget pressures are affecting our ability to finance infrastructure improvements. The City has been very cautious about establishing a recycling program because of the potential for unexpected costs and has learned from the experience of other municipalities. Program must be market driven.

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ORGANIZATIONAL UNIT:

1.2 Development and Planning Department

CONTACT PERSON:

William B. Campbell, Senior Planner, Planning Division, Development and Planning Division, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6506.

DEFINITION OF SUD:

Familiar with the concept but not clear how it is relevant at the municipal as opposed to the national or provincial levels.

INITIATIVES:

1. **Environmental assessment requirements in Official Plan (implementation)**
2. **Downtown rejuvenation and infill program (implementation)**

COMMENTS:

The Department will probably come under increasing pressures to reframe its policies with environmental terminology. An alderman recently called for the establishment of a municipal Round table on Environment and Economy.

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ORGANIZATIONAL UNIT:
1.3 Social Planning Department**CONTACT PERSON:**

Harold Crowell, Director, Social Planning Department, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6455.

DEFINITION OF SUD:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (definition from the Brundtland report).

INITIATIVES:

1. Nutrition program that provides extra milk and orange juice and nutritional counselling to low income families (implementation)
2. Cloth diaper program for single mothers on social assistance (pilot project)
3. Human Resources Development Association work training program (implementation)

COMMENTS:

Welfare is the most unsustainable approach to the provision of social services.

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Intergovernmental Committee on Urban
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2. CITY OFFICES AND DEPARTMENTAL UNITS WITH SUD INITIATIVES

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ORGANIZATIONAL UNIT:**2.1 Energy Office****DATE ESTABLISHED:**

1985

BUDGET:

\$135,000

STAFF:

1

ORIGIN/MOTIVATION:

Energy management in the City began in the 1970s during the energy crisis when an interdepartmental committee was established to deal with the issue. The energy management program initially focused on home owners because of the availability of federal and provincial assistance programs, but later turned its attention to City-owned buildings. A consultant was hired to investigate methods for tracking the City's energy costs and usage. One of the recommendations of this study was to establish an Energy Office with permanent staff.

CONTACT PERSON:

Doug Rafuse, Assistant Energy Management Engineer, Energy Office, Engineering and Works Department, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6416.

REPORTS TO:

Superintendent of Mechanical Plant, Engineering and Works Department.

DESCRIPTION:

The mandate of the Office extends to energy management in City-owned and occupied buildings. The Office oversees the operation of a computerized Energy Management Control System (EMCS) which monitors and controls the use of energy in 17 buildings.

PROBLEMS/SUCCESES:

The EMCS is responsible for energy savings worth about \$130,000 annually. It has also resulted in a decrease in complaints about over- and under-heating in City buildings.

DOCUMENTATION:

Doug Rafuse (1989) **Energy Management Control Systems: How the City of Halifax Saves Money and Increases Productivity**, Paper presented at a conference of the American Public Works Association, September, 1989.

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4. SELECTED INITIATIVES

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INITIATIVE:

4.1 Cloth Diaper Program

CURRENT STATUS:

Pilot project

ADMINISTERED BY:

Social Planning Department

BUDGET:

\$210/diaper kit

ORIGIN/MOTIVATION:

The idea for the initiative came from City staff. The primary motivation for the program was an economic one. A number of mothers on social assistance had expressed an interest in using cloth diapers but were unable to afford the initial cost of purchasing them. City staff anticipated that the avoided cost of purchasing disposable diapers would also lead to significant economic savings for participants.

CONTACT PERSON:

Bonnie Anderson, Nutritionist, Social Planning Department, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-9677.

DESCRIPTION:

The program is directed at mothers who are single, separated or divorced, are involved with the City's milk and orange juice ticket program, have babies less than 6 months old, are on social assistance, and have expressed interest in using cloth diapers. City nutritionists deliver the diapers to the women in their homes and discuss with them how to use and care for the diapers. The diaper kits contain 2 dozen small and 2 dozen medium size flannelette diapers, 1 box of diaper liners, 4 diaper pins, 5 pairs of water proof pants, 1 box of sterilizer, 6 litres of detergent, 1 diaper pail and 1 wooden clothes drying rack. The City purchases the kits from the Junior League, which purchases the diapers from a division of the City's Human Resources Development Association and assembles the kits.

PROBLEMS/SUCCESSSES:

The pilot project has been a success. Eighteen of 20 participants were using the cloth diapers at the 6 month interview. One unexpected benefit of the program has been an increase in self-esteem among participants. Mothers reported that they felt they were doing something important for their babies and the environment and they had more control over their budget. Education and follow-up were essential to the program in order to resolve initial problems. Follow-ups and evaluations were conducted at 2 weeks, 3 months, 6 months and 1 year into the program. The program has now been expanded and about 10 kits are being distributed per month.

DOCUMENTATION:

Bonnie Anderson (1991) Diaper Evaluation - Draft, Social Planning Department, City of Halifax.

INITIATIVE:

4.2 Human Resources Development Association

CURRENT STATUS:

Implementation

ADMINISTERED BY:

Self-administered

BUDGET:

1988 Revenues: \$3,492,340

1988 Expenses: \$3,435,495

1989 Revenues: \$3,894,074

1989 Expenses: \$4,098,532

ORIGIN/MOTIVATION:

The Association received an initial demonstration grant in 1978 from the federal Health and Welfare Department and operating funds from the City of Halifax that were cost-shared 75% by the provincial Department of Community Services. The purpose of the grant was to demonstrate more effective use of social assistance funds.

CONTACT PERSON:

Harold Crowell, Director, Social Planning Department, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6455.

DESCRIPTION:

The Human Resources Development Association (HRDA) was established in 1978. Its mandate is to create long term employment opportunities for persons who are experiencing difficulty entering or re-entering the work force. For every person taken off welfare by the program, the City pays 50%-100% of that person's salary for the first six months. Funding is also provided by the federal and provincial governments. HRDA consists of three divisions which are described below.

The Enterprises Division consists of five businesses:

1. Nova Sewing Contractors produces a variety of products, including children's clothing, cloth diapers and surveillance instrument parachutes.
2. Skyline Industrial Painters have had contracts to paint bridges, hospitals, commercial buildings, marine work and other large projects.
3. Magna Industrial Services provides general labour, demolition, lawn care, property clean up, snow removal, roof repair and janitorial services.
4. Environ-Care Services provides curbside residential collection of multi-material recyclables under contract to the City for its Blue Bag program and recycling collections for office buildings, schools and industry. This company has also won the contract to operate the City's proposed Material Recovery Facility.
5. Property Management Division manages five facilities in the City, including a family court building, a residence and a community centre.

The Community Economic Development Division operates in one of the City's poorest neighbourhoods and has been responsible for the following three types of initiatives:

1. Community economic development and education initiatives include a Work Orientation Workshop for youths facing barriers to continuing their education.
2. Community economic endeavours include the use of an old movie theatre for art exhibits, for a cafe and for the provision of low-rent performance space to community groups.
3. Small business development initiatives include the establishment of a development fund that provides loan capital to new small businesses.

The Training Division administers the following programs:

1. OPTIONS Work Activity Program is a 30 week program which offers educational upgrading, life skills training, individual counselling, work skills training and work placements to youths and adults.
2. Repair and Maintenance Projects offer social assistance recipients practical experience in the major building trades.
3. The Driver Training Program offers a certified Driver Education Program to social assistance recipients.
4. The Janitorial Training Program offers classroom instruction, practical training and on-the-job work placements for janitorial positions.

PROBLEMS/SUCCESES:

HRDA employs about 170 people who would otherwise be on welfare. Net sales for HRDA were between \$4 million and \$5 million in 1990. Two operations, one which produced sweaters for local markets and another which operated a carpet cleaning business, closed due to financial difficulties.

DOCUMENTATION:

Human Resources Development Association (1990) **Human Resources Development Association: Annual Report, 1989-90.**

INITIATIVE:

4.3 Waste Recycling Program

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

Political and public pressures

ADMINISTERED BY:

Engineering and Works Department

CONTACT PERSON:

Jim Bauld, Management Assistant to the Director, Engineering and Works Department, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6962.

DESCRIPTION:

The City's recycling programs include curbside Christmas tree collection, office paper recycling in City Hall and a leaf composting program for leaves from City parks, playgrounds, boulevards, streets and curbside. In April, 1991, the City launched its "Blue Bag" multi-material (newspaper, glass, aluminum) recycling program for households. Glad Canada provided assistance to the City for purchasing the plastic bags and for advertising. After using up the bags in their initial blue bags kits, householders must buy any further bags they wish to use at local retail stores. The used bags will be recycled. The anticipated cost of the program is \$200/tonne or \$1.87/household.

PROBLEMS/SUCCESES:

There was a great deal of public pressure on the City to provide a multi-material curbside collection service for recyclables. Blue Bags were selected over Blue Boxes because of the high cost of the boxes without external funding assistance. There has been an initial problem with scavengers collecting aluminum cans from the Blue Bags. Once the regional Material Recovery Facility has been constructed, tin and plastics will be added to the program.

DOCUMENTATION:

Memorandum from the City Manager to City Council, November 30, 1990, **City Recycling Programs.**

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INITIATIVE:

4.4 Environmental Assessment Requirements in Official Plan

CURRENT STATUS:

Implementation

ORIGIN/MOTIVATION:

Request from a member of Council.

ADMINISTERED BY:

Development and Planning Department

CONTACT PERSON:

William B. Campbell, Senior Planner, Planning Division, Development and Planning Division, City of Halifax, P.O. Box 1749, Halifax, Nova Scotia, B3J 3A5, (902) 421-6506.

DESCRIPTION:

Council may require that development applications include a statement of the environmental impacts of the proposed development on and off the site and identify ways and means to mitigate any negative effects, particularly as they relate to such matters as air and water pollution, erosion and sediment control, and protection of significant natural, aesthetic, and amenity values.

PROBLEMS/SUCCESSSES:

The province was originally reluctant to approve the Municipal Plan amendment in 1984 allowing the City to require environmental assessments (EAs), claiming that EAs were a provincial responsibility, but eventually did approve the proposal. In practice, only large projects are requested to prepare EAs, although other types of projects must also discuss environmental implications, to varying degrees. Only two to three applications to date have been required to submit environmental impact statements.

DOCUMENTATION:

City of Halifax (1991) **Municipal Development Plan for the City of Halifax, Part II, 1978 (Consolidated to 1991).**

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Planning

CONTACT PERSON:

Cliff Johnston, Urban Planner for Development Controls, Planning Department, City of St. John's, P.O. Box 908, St. John's, Newfoundland, A1C 5M2, (709) 576-8781.

DEFINITION OF SUD:

Familiar with the concept but unable to define it.

INITIATIVES:

1. **Environmental Advisory Committee (implementation)**
2. **Environmentally Sensitive Area Designation in zoning map (implementation)**
3. **Requirements for Land Use Impact Assessments, Environmental Analysis Reports and Conservation Plans in Municipal Plan (implementation)**

COMMENTS:

Developers have expressed concern over the extra time involved in submitting development applications for review by the Environmental Advisory Committee. Even a few weeks delay can be critical, given the City's short construction season. An area where further research is needed is in the definition of Environmentally Sensitive Areas. In some cases, the borders of the City's Environmentally Sensitive Areas appear to be too large, while in others they are too small.

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ORGANIZATIONAL UNIT:

1.2 Engineering and Works Department

CONTACT PERSON:

J. Finn, Director of Engineering and Works, City of St. John's, P.O. Box 908, St. John's, Newfoundland, A1C 5M2, (709) 576-8781.

DEFINITION OF SUD:

Development that works in harmony with the environment and has no net negative impact on the environment.

INITIATIVES:

1. **Storm Water Management Plan (implementation)**

COMMENTS:

Sustainable development is a concept that has been a topic of discussion in the community but we have not yet done much about it. The City does not have the same development pressures that others do and a lack of industry means that we do not have the same problems with air or water pollution.

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2. CITY OFFICES AND DEPARTMENTS WITH SUD INITIATIVES

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INITIATIVE:	DATE ESTABLISHED:
2.1 Environmental Coordinator's office	1990

REPORTS TO:	STAFF:
Director of Engineering and Works	1

ORIGIN/MOTIVATION:
Suggested by a staff member and by Council

CONTACT PERSON:
Geraldine King, Manager, Environmental Initiatives, Engineering and Works Department, City of St. John's, P.O. Box 908, St. John's, Newfoundland, A1C 5M2,(709) 576-8613.

DESCRIPTION:
Responsibilities of the environmental coordinator's position include the following:

1. Coordinates activities as they relate to volunteer and citizen groups involved in litter clean-up campaigns or projects.
2. Develops, implements and maintains Public Information Programs regarding waste disposal, the environment and the City's and the citizen's roles in such programs.
3. Organizes and manages neighbourhood, group and individual waste composting programs.
4. Monitors developments and emerging technologies in the waste management field and determines if there are local applications.
5. Liaises with and provides assistance to the private sector with respect to waste management strategies.
6. Manages the City's proposed Clean Community System.

These responsibilities have expanded since the position was established to include such activities as the preparation of a draft Environmental Policy for City operations. The Policy covers the following topics: environmentally-friendly purchasing, recycling in City-owned public buildings, "smoke-free" City buildings, energy and water conservation, CFC and halon use, and chemical minimization. It is due for implementation by December 31, 1991.

PROBLEMS/SUCCESES:

There has been good support for the office.

COMMENTS:

There has been some talk of establishing a municipal Round table on Environment and Economy but this will probably not happen until the provincial Round table has progressed further. Stewardship should be encouraged, but it faces public attitude barriers. Some residents feel that municipal government alone should look after environmental problems because residents pay taxes for the municipality to do so. There are instances where these attitudes are changing. For example, a group of senior citizens has organized a local recycling program and residents adjacent to a litter-covered road in the City approached private industry for funding to undertake a clean-up.

DOCUMENTATION:

City of St. John's (1991) *City of St. John's Environmental Policy (Draft)*.

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3. CITY GOVERNMENT COMMITTEES AND ADVISORY COMMITTEES

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ORGANIZATIONAL UNIT:

3.1 Environmental Advisory Committee

DATE ESTABLISHED:

1988

REPORTS TO:

Planning and Development Committee of Council

ORIGIN/MOTIVATION:

The Committee was originally established as an advisory body for the review of applications located in proximity to wetlands and waterways. The Committee's responsibilities have expanded to include review of any development near Environmentally Sensitive Areas.

CONTACT PERSON:

Cliff Johnston, Urban Planner for Development Controls, Planning Department, City of St. John's, P.O. Box 908, St. John's, Newfoundland, A1C 5M2, (709) 576-8383.

MEMBERSHIP:

Up to 9 members of the public may be appointed, but there are only six members at the moment. The membership must include: professionals in the fields of ecology and/or biology, the recreational use of open spaces, hydrology and environmental law and one representative from groups actively involved in wildlife protection, conservation and the recreational use of natural open spaces.

DESCRIPTION:

The Committee reviews development applications for sites located within or adjacent to Environmentally Sensitive Areas as defined on the City's zoning map. The Committee makes recommendations as to whether an environmental analysis report (EAR) or environmental conservation plan is warranted. The terms of reference for such a report or plan are prepared by the Committee which has environmental expertise. The Committee also recommends to Council whether or not to accept the EAR. Only three development applications to date have been required to produce conservation plans.

PROBLEMS/SUCCESES:

There is no Council representative on the Committee at the moment and therefore no direct link to Council. Attempts are being made to remedy this. The Committee is currently preparing review guidelines so that developers will know what to expect in the review and so that staff can explain to developers what modifications are needed before submission. No development applications have been rejected by the Committee to date although several have been sent back to the developer for modification.

DOCUMENTATION:

City of St. John's (1988) St. John's Land Use Zoning and Subdivision Regulations.

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4. INITIATIVES

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INITIATIVE:

4.1 Requirements for Land Use Impact Assessments, Environmental Analysis Reports and Conservation Plans in Municipal Plan

CURRENT STATUS:

Implementation



CONTACT PERSON:

Cliff Johnston, Urban Planner for Development Controls, Planning Department, City of St. John's, P.O. Box 908, St. John's, Newfoundland, A1C 5M2, (709) 576-8781.

DESCRIPTION:

Land Use Impact Assessments are required for applications that involve the introduction of a Conditional Zone, the development of a shopping centre, an agricultural or forestry use and may be required for any significant development.

An Environmental Analysis Report (EAR) is required for any development affecting an Environmentally Sensitive Area (ESA) or any development that, in the opinion of Council, has an impact on the environment. The EAR must include the following:

ST. JOHN'S

1. a description of the purpose of the undertaking;
2. a description of and a statement of the rational for the undertaking, alternative methods of carrying out the undertaking and the alternatives to the undertaking;
3. a description of:
 - a. the environment that will be affected directly or indirectly;
 - b. the effects that will be caused to the environment;
 - c. the actions necessary to prevent, change, mitigate or remedy the effects that might reasonably be expected upon the environment by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and
4. an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking.

A Conservation Plan must be submitted prior to the granting of Final Approval for any subdivision and/or development for which an EAR has been prepared. A Conservation Plan Agreement between Council and the applicant shall specify: the contents of the Conservation Plan, applicable development fees, the timing and phasing of the implementation of the Conservation Plan, the duration of the Agreement, and any penalties or fines for violation of the Agreement.

COMMENTS:

The City uses the term "Environmental Analysis Report" rather than "Environmental Impact Statement" because the latter term is used by the province and implies a different type of evaluation process.

DOCUMENTATION:

- City of St. John's (1988) St. John's Land Use Zoning and Subdivision Regulations.
- City of St. John's (1991) St. John's Municipal Plan As Revised, 1990.

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Planning

CONTACT PERSON:

Jeff Hamm, Manager, Planning Services, City of Whitehorse, 2121 2nd Ave., Whitehorse, Yukon, Y1A 1C2, (403) 668-8337.

DEFINITION OF SUD:

Sustained use of resources over the long term.

INITIATIVES:

1. Environmentally Sensitive Areas defined in official community plan (implementation)
2. Establishment of an Environmental Advisory Board to review development applications (conceptual design)

COMMENTS:

The City is preparing to incorporate environmental issues into its zoning bylaw, but there are no specific regulations in place yet.

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ORGANIZATIONAL UNIT:

1.2 Public Works

CONTACT PERSON:

Mitch Moroziuk, City Engineer, City of Whitehorse, 2121 2nd Ave., Whitehorse, Yukon, Y1A 1C2, (403) 668-8307.

DEFINITION OF SUD:

Using the resources that you have to work with in an urban area so that you will continue to have those resources in the long term.

INITIATIVES:

1. Recycling depot in the City's industrial zone (implementation)
2. Using recycled, crushed green glass in glasphalt (implementation)
3. New secondary (possibly tertiary) sewage treatment plant (conceptual design)

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1. CITY GOVERNMENT DEPARTMENTS

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ORGANIZATIONAL UNIT:

1.1 Planning and Lands

CONTACT PERSON:

Rick Zerr, Director, Department of Planning and Lands, City of Yellowknife, P.O. Box 580, Yellowknife, Northwest Territories, X1A 2N4, (403) 920-5624

DEFINITION OF SUD:

Development that helps to sustain the city. In Yellowknife, the most important strategy for achieving sustainable development is expanding the economic base of the City.

INITIATIVES:

1. Creation of a position for an economic development officer (under consideration)
2. Participated in establishment of the Northern Frontiers Visitors Centre (implementation)
3. Construction of a new arena (under consideration)

COMMENTS:

Two factors that inhibit economic development in the City are that it does not have a large market base and is also isolated at the end of a land transportation corridor that becomes impassable at certain times of the year. One of the objectives in establishing an economic development officer position will be to develop economic opportunities for a local market.

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ORGANIZATIONAL UNIT:

1.2 Public Works

CONTACT PERSON:

Dave Nicklen, Director, Department of Public Works, City of Yellowknife, P.O. Box 580, Yellowknife, Northwest Territories, X1A 2N4, (403) 920-5638.

DEFINITION OF SUD:

Not familiar with the term

INITIATIVES:

1. Subsidizing bus service that was formerly run privately and provided infrequent service (implementation)
2. City donates time and occasionally loading equipment to the City's non-profit recycling organization (implementation)
3. Promoting low-flow showerheads (implementation)

- 4. Promoting toilet-tank dams (conceptual design)
- 5. Changing bylaws for water heating (implementation)

COMMENTS:

Water is very expensive in the City because it must be heated at central pumphouse before circulation between November and June.

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